FNP-HH-72-102

PB 207 310

THE FERRYBOAT
Ellis Island
Transport to Hope

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
Springfield, Va. 22151

April 30, 1969

BIBLIOGRAPHIC DATA SHEET

1. Report No. FNP-HH-72-102

2.

3. Recipient's Accession No.

4. Title and Subtitle

THE FERRYBOAT ELLIS ISLAND, TRANSPORT TO HOPE

5. Report Date April 30, 1969

6.

7. Author(s) Edwin C. Bearss

8. Performing Organization Rept. No. FNP-HH-72-102

9. Performing Organization Name and Address

Division of History
Office of Archeology and Historic Preservation
801 - 19th Street, N. W.
Washington, D. C. 20006

10. Project/Task/Work Unit No. RSP SL-H-2

11. Contract/Grant No.

12. Sponsoring Organization Name and Address

Department of the Interior
National Park Service
Washington, D. C. 20240

13. Type of Report & Period Covered

Basic Data Study

14.

15. Supplementary Notes

16. Abstracts

This report was prepared to satisfy the research needs set forth in Historical Resource Study Proposal SL (Ellis Island)-H-2. It is a structural study and evaluation of the U.S. Ferryboat-"Ellis Island." This study is designed to provide information regarding the construction and history of the "Ellis Island.". For 50 years the "Ellis Island" was intimately associated with the Ellis Island story. She transported immigrants from Ellis Island to the United States and put them "ashore on our land--their future home and country." The "Ellis Island" is important in interpreting the story of Ellis Island and immigration. The "Ellis Island" was the conveyance which landed the immigrant, of whom there were some 12,000,000 between 1904 and 1954, at the barge slip so that he could then set foot upon the soil of the land of his dreams, America. The study relates directly to the possibility of a reconstruction of the "Ellis Island" and her berthing and interpretation in a significantly appropriate setting.

17. Key Words and Document Analysis. 17a. Descriptors

* National Parks
History
Public Lands
Reviews

17b. Identifiers/Open-Ended Terms

* New York City National Park Service Group

Statue of Liberty National Monument, includes Ellis Island

17c. COSATI Field/Group 5 D

18. Availability Statement Available from:
National Technical Information Service, Input Sec.
5285 Port Royal Road
Springfield, Virginia 22151

19. Security Class (This Report) UNCLASSIFIED

20. Security Class (This Page UNCLASSIFIED

21. No. of Pages ~~229~~ 235

22. Price

FORM NTIS-35 (10-70)

USCOMM-DC 40329-P71

THE FERRYBOAT *Ellis Island*

Transport to Hope

Statue of Liberty National Monument

By

EDWIN C. BEARSS

DIVISION OF HISTORY
Office of Archeology and Historic Preservation
April 30, 1969

National Park Service U.S. Department of the Interior

THE FERRY BOAT *ELLIS ISLAND*--TRANSPORT TO HOPE

by

Edwin C. Bearss

FOREWORD

This report was prepared to satisfy the research needs as set forth in Historical Resource Study Proposal SL(Ellis Island)-H-2, Structural Study and Evaluation of the U.S. Ferryboat—*Ellis Island*. This study is designed to provide information regarding the construction and history of *Ellis Island*. For 50 years *Ellis Island* was intimately associated with the Ellis Island story.

A number of people have assisted with the preparation of this report. Thanks are due W. Earl Geoghegan of the Smithsonian Institution for locating the lines and specifications of the vessel; to Hardee Allen and Donald Mosholder of the National Archives for suggesting sources and taking a keen interest in the project; to George Thomas of the Immigration and Naturalization Service for making available the mountains of material found in that agency's files; to Dr. George Svejda for suggesting sources and sharing his knowledge of the history of immigration; to Frank Sarles for proof-reading the final draft; and to Mrs. Lucy Wheeler for typing the manuscript, for keen interest shown, and her editorial suggestions.

E.C.B.

Washington, D. C.
May 23, 1969

TABLE OF CONTENTS

FOREWORD i
LIST OF ILLUSTRATIONS iii

CHAPTER I Harlan & Hollingsworth Build a Steel Hull Ferryboat 1

CHAPTER II Maintenance of the Craft, 1904-1918 16

CHAPTER III Maintenance of the Craft, 1918-1945 29

CHAPTER IV Edward Corsi Recalls the Ferryboat 61

CHAPTER V Efforts to Secure a Second Vessel 65

CHAPTER VI *Ellis Island* Makes Her Last Run 77

CHAPTER VII Statement of Significance 88

APPENDIX A Specifications for a "Screw Two-Deck Steel Hull Ferryboat" 89

APPENDIX B "Specification for all Labor and Materials Required for Docking, Cleaning, Painting and Machine Repairs on Steel Hull Ferry Boat 'Ellis Island'," Sept. 25, 1916 117

APPENDIX C "Specifications for all Labor and Materials Required for Docking, Scaling, Cleaning, Painting, Alterations, and Machine Repairs on the Steel Hull Ferryboat 'Ellis Island'," April 1921 126

APPENDIX D "Specifications for all Labor and Materials Required for Docking, Scaling, Cleaning, Painting, Alterations, and Machine Repairs on the Steel Hull Ferryboat 'Ellis Island'," 1937 161

APPENDIX E Report on Extras Required in August and September 1937 to Pass Safety Inspection 174

APPENDIX F Card Index File, *Ellis Island* 185

APPENDIX G Cost of Repairs to *Ellis Island* 191

BIBLIOGRAPHY 192

LIST OF ILLUSTRATIONS AND PLANS

PLATES (Following Bibliography)

I Outboard Profile, Ferryboat *Ellis Island*

II United States Ferryboat, "Ellis Island"

III Ferryboat *Ellis Island*, Docked in Ellis Island Slip

IV Aerial View of Ellis Island

V Capt. Raymond Ives in Cabin of *Ellis Island*

VI Pilothouse at Ellis Island End of Ferryboat

VII Immigrants Disembarking from New York End of Ferryboat *Ellis Island*

VIII Port Quarter of *Ellis Island*, Docked at Ellis Island

IX Starboard Quarter of *Ellis Island*, Docked at Ellis Island

X Ferryboat *Ellis Island*, Sunk in Ellis Island Slip

XI Ferryboat *Ellis Island*, Sunk August 1968

XII Sunken Ferryboat *Ellis Island*

XIII Lines of *Ellis Island*

XIV Alteration Details, Ferryboat *Ellis Island*, Sept. 25, 1916

XV Plan and Sections of Ferryboat *Ellis Island*, April 22, 1921

XVI Plan of Deck, Ferryboat *Ellis Island*, April 22, 1921

XVII Emergency Lighting System, Ferryboat *Ellis Island*

CHAPTER I

Harlan & Hollingsworth Build a Steel Hull Ferryboat

In the years following the formal opening of the United States Immigration Station at Ellis Island on January 1, 1892, transportation between the station and the Battery, on Manhattan Island, was "performed by an indifferent class of vessel." This continued to be the situation for several years, although no ferry in the harbor performed "more arduous work." Until *John G. Carlisle* was chartered, the oldest and most "worn-out types of steam vessels were used" to transport employees of the Immigration and Marine Hospital Services back and forth to work on Ellis Island and to land newly admitted immigrants in the country that was to be their home.[1]

When Commissioner-General of Immigration Frank Sargent prepared a budget to be submitted to the 57th Congress, it was determined to include a request for $110,000 to construct a ferryboat to be owned and operated by the Immigration Service. This vessel, if Congress went along with the proposal, would replace *John G. Carlisle*. The 2d Session of the 57th Congress treated the Ellis Island Immigration

---

[1] *The Nautical Gazette*, February 4, 1904, p. 33.

Station liberally. Besides appropriating $110,000 for a new steel hulled ferryboat, it voted $150,000 for the creation of a "new island" and $100,000 for the extension of the hospital.[2]

The contract for construction of the ferryboat was awarded by the Immigration Bureau to Harlan & Hollingsworth Company of Wilmington, Delaware, on July 1, 1903. Harlan & Hollingsworth's bid of $91,715 did not include "certain electrical and other equipment, estimated to cost about $6,000 additional."[3] Learning of this development, the most influential trade journal in the shipbuilding field, *The Nautical Gazette,* informed its subscribers on February 4, 1904, that the Ellis Island-Battery route would soon "be covered by a modern, up-to-date craft, of the double screw type."[4]

Plans and specifications for a "Screw Two-Deck Steel Hull Ferry Boat" were forwarded to Harlan & Hollingsworth by William Williams, United States Commissioner of Immigration at the Port of New York. (Copies of plans and specifications for the vessel accompany this report. Bethlehem Steel, who purchased Harlan & Hollingsworth in 1904, has been contacted in an effort to secure the plans, but, after searching their files, they report the plans no longer exist.)

---

[2] *Annual Report of the Commissioner-General of Immigration for the Fiscal Year Ended June 30, 1903* (Washington, 1903), pp. 69-70.

[3] Ibid.; *Nautical Gazette,* Aug. 6, 1903, p. 75.

[4] *Nautical Gazette,* Feb. 4, 1904, p. 33.

In external appearance the new ferryboat would resemble the Jersey Central propellers *Mauch Chunk* and *Easton*, although she would not be as large. (An outboard profile of the craft supplements this study.) Her interior design would be "quite unlike any ferryboat yet built." Inasmuch as the Ellis Island ferryboats were not called to carry teams, the entire lower deck could be used for passengers and baggage. Thus her maindeck cabin would occupy the entire house, from guard to guard, except for a small center light well over the engine, and through which the funnel was to protrude. The stairs to the upperdeck were also to be located at this point. One one side would be the men's toilet and a sick bay, and on the other the women's toilet. Housing on the upperdeck would be given over "entirely to a cabin for employees" and to the Commissioner's Cabin, as well as the pilothouses. There were no staterooms. Indeed, the only berths would be eight for the crew, located in the hold.[5]

The steel hull was to be divided into six compartments by five watertight bulkheads. The keelson was to consist of a continuous vertical plate, 42 inches deep, of 17 1/2-pound material, the butts having double straps treble-riveted. At the same time, the keelson was to extend 6 inches below the base, and two side bars, 6 inches deep and 30 pounds per square foot, together with the lower edges of the two garboard strakes, would form the outer keel. There was to be a double bottom 36 inches deep at the center, to extend between the collision bulkheads, and which could hold 15,000 gallons of fresh water, the ends being made into a feed tank for boiler use by fitting a water-tight door. The keelson would be connected to the double bottom plating (10-pound per square foot) by 4 x 3-inch x 8-pound angle. Frames would be 3 1/2 x 3-inch by 7.9-pound per foot plain angles, spaced 24 inches between centers, between collision bulkheads, and beyond these the spacing would be 15 inches. Frames in the double bottom would be 2 1/2 x 2 1/2-inch x 5.1-pound angles, and the reverse bars were to be 2 1/2 x 2 1/2 x 5.1-pound bars extending along the top of floors to the deck on alternate frames and to a distance of six inches beyond the bilge keelson on intermediate frames. Under the engines and boilers the reverse frames were to be doubled. Floor plates would be 36 inches deep and 15-pound weight in way of double bottom, except under the engines and boilers the weight was to be 18 pounds. The depth of the floor plates was to be increased at the ends of the vessel, and the floors to be connected to the center keelson by double angles, 3 x 3-inch x 7.2-pound, and to the double bottom and marginal plates by single 2 1/2 x 2 1/2-inch x 5.1-pound angles. There would be four belt frames on each side of the craft, 14 inches wide by 12 1/2-pound weight, faced with double 2 1/2 x 2 1/2-inch by 5.1-pound angles. The rudder posts were to be 6 x 3 1/2-inch of cast steel, and the end posts 6 x 3-inch, and the sternposts 6 x 4 inches. These posts were to be of cast steel. Hand and steam-powered steering gear would be provided at each end of the craft.[6]

---

[5] Ibid.

The new ferryboat's deck beams were to be 5 x 3-inch x 11.2-pound on each frame, being connected to frames by gusset plates from guard to guard, collared where they passed through the sheer strake. The sister keelson, bilge keelson, and side stringers would be composed each of double 4 x 3-inch by 8-pound angles riveted back to back. Shell plating of the hull was to be arranged inside and out alternately, being single riveted in the main, except the sheer to the sides and the garboard to bottom being double. The butts of shell plates were to be lapped and treble riveted. The sheer and garboard strakes, and waterline strakes, for a distance of 100 feet amidships, were to be of 17 1/2-pound material, while the side, bilge, and bottom strakes would be 15-pound.[7]

As the ferryboat could be expected to encounter ice floes, the waterline strakes at the bows were to be composed of plates of 20-pound weight for every square foot. The five water-tight bulkheads, all to be built of 10-pound plate, stiffened vertically by 3 1/2 x 3-inch x 7.9-pound angles, would be spaced 24 inches. On the opposite side the horizontal stiffeners were to be of angles of similar size, spaced 48 inches. There would be a hinged water-tight door in each bulkhead, while the engine foundations were to be built up of 25-pound plating. The coal bunkers would have a capacity of about 20 tons, and would be filled from the maindeck through two 17-inch scuttles. The center house, through which light and air would be admitted into the machinery space, would be "built of steel, in the approved modern fashion." Plating would be of 6- and 8-pound weight. A steel bulkhead would divide the engine- and boiler-room, between the main- and cabindecks.[8]

---

[6] Ibid.

[7] Ibid.

The vessel would be powered by a "compound surface-condensing engine, having cylinders 11 and 36 in. in diameter, by 24-in. stroke." The high-pressure cylinder was to have a piston valve, and the low-pressure cylinder a double-port slide valve. Stevenson's link type of gear valve would be fitted, while the crank shafts would be the built-up type. The condenser was to contain 950 square feet of condensing surface, being rectangular in shape and of cast iron. There would be one centrifugal circulating pump, one vertical twin-cylinder air pump, one vertical duplex brass-lined feed pump, one horizontal duplex brass-lined fire pump, and one horizontal duplex sanitary-pump. The engine would be capable of 120 revolutions per minute, with a horsepower of about 450.[9]

---

[8] Ibid., p. 47.

[9] Ibid.

Two single-ended Scotch boilers, each 10 feet in diameter by 12 feet in length, would provide steam at 135 pounds pressure. There would be two furnaces to each boiler. Total grate surface would be 82 square feet and the total heating surface 2280 square feet.[10]

The joiner work was to be plain but serviceable. Decking would be of Oregon pine, the rails of white oak, together with the stanchions, and fenders of yellow pine. On the maindeck the outside of the cabin was to be staved with white pine to the height of the rail, while above this point the white pine was to run fore and aft. Inside, the large maindeck cabin was to be finished with large burlap panels, with stiles, rails, and moulding of oak. The glazing would be of the best "American double-thick glass." The Commissioner's Cabin would be finished in similar fashion, and was to contain an upholstered locker seat, a swinging table of oak, in addition "to the usual outfit of chairs, etc." Seats in the main and upper cabins would be of slotted oak, while the floors were to be covered with interlocking rubber tiling.[11]

The ferryboat would be heated by steam, with iron pipes in the main cabin, radiator in the Commissioner's Cabin, while in the pilothouses there would be coils of brass pipe.[12]

---

[10] Ibid. [11] Ibid.; *Every Evening*, Wilmington, Del., March 19, 1904.

[12] Ibid.

The new ferryboat's general dimensions would be:

Length over all	160 feet
Length between perpendiculars	154 feet
Beam	37 feet
Beam over guards	45 feet
Depth of hold at center	15 feet, 3 inches
Draft of water	9 feet 3 inches
Displacement	660 tons[13]

Construction was started on the vessel in August. Harlan & Hollingsworth subcontracted construction of the single-ended Scotch boilers to H. & H. Coy of Wilmington. On October 6, 1903, Commissioner-General Sargent asked H. & H. Coy to furnish the Bureau of Immigration with "plans for the boilers which you are constructing for use in the steel ferryboat to ply between Ellis Island and New York."[14] The blueprints were duly forwarded, and their receipt acknowledged by the Commissioner-General on October 9.[15] Meanwhile, George Uhler, Supervising Inspector-General of the Steamboat Inspection Service, had been ordered to Wilmington to inspect the materials of which the boilers were to be made.[16]

---

[13] *Nautical Gazette*, Feb. 4, 1904, p. 33.

[14] Commissioner-General to H.& H. Coy, Oct. 6, 1903, NA, RG85, Ltrs. Sent, Immigration Bureau. Some time between October and March, the Immigration Service determined on a name for the ferryboat under construction at Harlan & Hollingsworth. She would be designated *Ellis Island*, after the New York Immigration Station.

[15] Commissioner-General to H. & H. Coy, Oct. 9, 1903, National Archives, Record group 85, Ltrs. Sent, Immigration Bureau.

[16] Commissioner-General to Uhler, Oct. 6 & 7, 1903, NA, RG85, Ltrs. Sent, Immigration Bureau.

Inspector Uhler visited Wilmington in the second week of October, and, after satisfying himself that the materials were of high quality, he gave H. & H. Coy the signal to go ahead.

The hull and superstructure had been completed by early March, and plans were made by the Immigration Service and Harlan & Hollingsworth for a gala launching on Saturday, March 19. A large number of invitations were mailed to influential persons, and numerous acceptances were received.[17] On the day of the festivities, the Wilmington *Every Evening* announced, "The handsome new ferryboat, *Ellis Island* will be launched this afternoon at the shipyards of Harlan & Hollingsworth."[18]

By the designated hour, a large crowd, along with the distinguished guests, had assembled at the ways on which the ferryboat rested. The guests had made their way from the third story of the Harlan & Hollings-

---

17. *Every Evening*, Wilmington, Del., March 19, 1904. Acceptances were received from: Secretary of Commerce & Labor George B. Cortelyou; Assistant Secretary L. O. Murray; Commissioner of Navigation E. T. Chamberlain; Supervising Inspector-General, Steamboat Inspection Service, George Uhler; the Delaware United States Senators L. Haisler Ball and J. Frank Allee; Quartermaster General C. F. Humphreys; Commissioner of Immigration F. P. Sargent; Commissioner of Immigration at Baltimore L. T. Weis; James Smith, Jr., Receiver,U. S. Shipbuilding Co.; Lt. Comdr. Alfred B. Fry, U. S. N.; Commissioner of Immigration, Ellis Island, William Williams; J. S. Rogers, Commissioner of Immigration at Philadelphia; Pliny Fisk, Stuyvesant Fish, William G. McAdoo, Charles Fairchild, W. W. Lee, George C. Boldt, George Sheldon, C. W. Wetmore, Thomas F. Ryan, Max Nathan, John E. Borne, and W. J. Curtis of New York; and George Gray, Andrew Gray, W. S. Hilles, and J. Frank Ball of Wilmington.

18. Ibid.

worth office building, where they had been entertained at an informal luncheon by Company President David C. Reid. Miss Mabel Sargent, daughter of Commissioner-General Frank Sargent of the Immigration Service, would christen *Ellis Island*. Along with Secretary of Commerce and Labor George B. Cortelyou and President Reid, Miss Sargent took position at the New York end of the craft. After appropriate ceremonies, at 2:15 o'clock she broke a bottle of champagne on the bow, and the "new and handsome ferryboat took her maiden plunge into Christiana River." A tug came alongside and pushed *Ellis Island* into position against a wharf. Here she would be moored, while her machinery was installed and "the finishing touches put to her."[19] In addition, all necessary nautical instruments, two compasses, small boats, life preservers, running lights, deck fittings, etc., had to be furnished.[20]

Although there had been delays, *Ellis Island* was nearly ready to put to sea by the end of April. On April 28 Commissioner-General Sargent requested Harlan & Hollingsworth to advise us "immediately as to the date and hour when it is proposed to have the trial trip of the

---

[19] Ibid., March 21, 1904; *New York Times*, April 18, 1954. In April 1954 a display case holding the remains of the champagne bottle hung in the wood-paneled cabin of *Ellis Island*. The cork and neck were intact, but by 1954, the red, white, and blue wrapping had faded.

[20] *Every Evening*, March 19, 1904.

Ellis Island ferryboat at Wilmington."[21] Harlan & Hollingsworth replied that the trial run of *Ellis Island* would take place at 11 a.m. on May 4.[22] Upon receipt of this information, Secretary of Commerce and Labor Cortelyou issued orders for Supervising Inspector-General Uhler to be present at the trial run and "to take the necessary steps to have an inspection made of the boilers and machinery."[23]

Meanwhile, last minute preparations were rushed at the shipyard. It was announced on Monday, May 2, that *Ellis Island* would leave the wharves on Wednesday in charge of Capt. Thomas Wood, with General Manager Lockhard supervising. On her arrival at New York, the ferryboat would be turned over to officials of the Immigration Service.[24]

At the designated hour on Wednesday, May 4, *Ellis Island* pulled away from the wharf. Aboard the big ferryboat, in addition to the crew were: Chief Engineer William M. Foist, who had superintended the construction of the vessel for the Bureau of Immigration, Inspector-General Uhler of Washington, D. C., and William B. Pritchett, Edward Genn, E. M. Cook, and J. M. Mulrooney of Wilmington.[25] Chuffing into the Delaware River, the vessel headed for the bay. After an uneventful run up the Jersey Coast, *Ellis Island* entered New York Harbor on the 5th. A reporter for the *New York Times* was present on the Battery to greet the vessel, and he informed his readers that the newcomer would take the place of *John G. Carlisle*, which would be employed hereafter to transport horses between the Aqueduct, Morris Park, and the Gravesend Race Tracks.

---

[21] Commissioner-General to Harlan & Hollingsworth, April 28, 1904, NA, RG85, Ltrs. Sent, Immigration Bureau.

[22] Commissioner-General to Harlan & Hollingsworth, May 2, 1904, NA NA, RG85, Immigration Bureau. Commissioner-General Sargent planned to be present at the trial run, provided there were no unexpected developments that might keep him in Washington.

[23] Cortelyou to Uhler, May 3, 1904, NA, RG85, Ltrs. Sent, Immigration Bureau.

[24] *Every Evening*, May 2, 1904.

The correspondent observed that

> the new boat, which cost $105,000, is 160 feet long and 45 feet wide, and has two decks, the lower being fitted for the accommodation of about 1,000 immigrants, while the upper is to be used by officials and passengers from New York. A hospital with room for twelve beds on wheels is a feature of the boat, and there is also a padded cell for the reception of any violent insane immigrants.[26]

On Saturday, May 8, Commissioner Williams formally "introduced the double end screw ferryboat *Ellis Island* to the harbor." Since taking office in April 1902, Williams had been "endeavoring to secure proper transfer facilities between the Immigration depot and Manhattan," so he was especially gratified by the arrival of the new steel hull ferryboat. At noon a number of ladies and gentlemen boarded the tug *H. B. Chamberlain* and were taken over to Ellis Island, where they boarded the new craft.[27] After a brief inspection, Pilot John J. Reilly called for the deckhands to cast off, and *Ellis Island* pulled out of the slip and headed up the North River, giving guests a delightful sail to a point near Hastings, where she turned around. The return trip was made against a strong headwind, but "she came along at a good clip, landing the guests in good season at the island." Before the guests returned to Manhattan aboard *H. B. Chamberlain*, Comissioner Williams provided them "with an excellent luncheon, which, owing to bracing spring air, was fully appreciated."[28]

---

[25] Ibid., May 6, 1904.

[26] *New York Times*, May 6, 1904.

Meanwhile, Supervising Inspector-General Uhler had prepared and forwarded his report on the trail run to the Secretary of Commerce and

---

[27] *Nautical Gazette*, May 12, 1904, p. 272. Among the guests were: Secretary of Commerce & Labor Cortelyou; Commissioner-General Sargent; Supervising Inspector-General Uhler; Supervising Engineer of Federal Buildings A. B. Frye; Surgeon-General Walter Wyman and Dr. George W. Storner, U. S. Marine Hospital Service; Captain Newcomb and Lt. H. Kotzschmer, U. S. Revenue Marine; Charles J. Dumas, of Messrs. Hudgins & Dumas; Frank Robinson, Secretary to the Commission of Immigration; along with a number of others.

[28] Ibid. President Reid of Harlan & Hollingsworth made the trip and "carefully looked after workings of the boat."

Labor. After carefully noting the contents, the report was mailed to Commissioner Williams, with instructions "to follow the suggestions therein made."[29] Although a diligent search of Record Group 85 and the files at the Immigration and Naturalization Service was made, it has been impossible to locate a copy of Uhler's report of May 5, 1904.

Before the government could make final payment to Harlan & Hollingsworth for construction of *Ellis Island* one problem had to be resolved--the question of mitigating the penalty for failure to complete the ferryboat by the date specified in the contract.[30] Harlan & Hollingsworth, in their defense, asked a waiver of the penalty clause, as the delays had been "caused by circumstances beyond the control of the contractor." Commissioner Williams was agreeable to the Secretary granting the waiver, because, as he pointed out, even had the vessel been delivered within the contract period, it would have been impossible to have put her in operation immediately, as the dredging of the approaches to the Ellis Island slip, to accommodate her deeper draft, was not completed until the first week of June.[31] Secretary

---

[29] Secretary of Commerce & Labor to Uhler, May 6, 1904, NA RG85, Ltrs. Sent, Immigration Bureau. A search of RG85 and the files of I & NS has failed to turn up the letter and Uhler's report on the trial run of *Ellis Island.*

[30] Commissioner-General to Harlan & Hollingsworth, June 6, 1904, Ltrs. Sent, Bureau of Immigration.

[31] Acting Secretary to Harlan & Hollingsworth, June 7, 1904, NA,

Cortelyou was satisfied by the argument presented, and he, in accordance with Paragraph 6 of the contract, ordered the retained percentage of the contract price paid to the shipbuilders.

It was the end of the first week of June 1904, before *Ellis Island* took over the route from Ellis Island to the Battery. At the same time, her predecessor, *John C. Carlisle,* was sent to Tietjen & Lang's drydock for painting and overhauling.[32]

Immigrants who reached New York in steerage at this time were disembarked from ship at the company's pier into barges and onto vessels like *General Putnam* and taken to Ellis Island for examination and processing. The steamboat companies provided the barges and tugs used to transport the steerage passengers from the pier to Ellis Island. After the immigrants had been cleared for admission, they boarded *Ellis Island* for the run across the harbor to Manhattan Island.

RG85, Ltrs. Sent, Immigration Bureau. A search of Record Group 85 and the files of I & NS has failed to turn up the letter from Harlan & Hollingsworth in which they ask for a waiver and cited the reasons it should be given.

32. *Nautical Gazette,* June 12, 1904.

CHAPTER II

Maintenance of the Craft, 1904-1918

Although she was a new vessel and had a steel hull, the Bureau of Immigration was required by regulations of the Steamboat Inspection Service to drydock *Ellis Island* twice a year to have her hull scaled and painted, and her machinery checked. During the 28-month period ending on October 31, 1906, *Ellis Island* was in drydock for "outside painting and machine repairs five times," or a total of 13 days. There had been expended on the craft for machinery repairs and painting $8, 215.36, the major portion being charged to repairs. A considerable percentage of this sum might have been saved had it been possible "to lay the boat up immediately upon the discovery of a broken propeller or other derangement of mechanism aboard." While *Ellis Island* was in drydock, it was necessary for the Immigration Service to rent a substitute boat to provide transportation over the route between Ellis Island and the Battery.[1]

Ellis Island, during the next eight years, continued to be taken into drydock biannually, in the spring and the fall, to have her hull scaled and painted, and adjustments made to her machinery. On other occasions emergency trips had to be made to the drydock. In May 1908 one of these runs was made, when one of the boat's rudder stocks was broken. Five months later, another trip to the drydock was made to repair *Ellis Island's* reversing gear, and in October the craft was laid-up while a broken rudder and loose piston rod were repaired.[2]

---

[1] Howell to Watchorn, Oct. 31, 1906, NA, RG85, File 51,540. Robert Watchorn in October 1906 was Commissioner of Immigration at Ellis Island.

In 1909 the ferryboat was laid-up briefly in February and again in September while a broken propeller was replaced. In February the propeller had been damaged, when the vessel, as she made a run in a pea-soup-like fog, crashed into the piles near the Battery slip. The cost of replacing a propeller was $200.[3] The ensuing 24 months saw *Ellis Island* laid-up twice, to have new propellers installed. By November 1911 the cost of replacing a propeller had increased by 50 percent to $305. Substitute boats were hired by the Immigration Bureau for from $65 to $75 per day.[4]

---

2. Ellis Island "Ferry" Card Index, NA, RG85. The card index, a copy of which is found in this report, lists File Numbers and correspondence found therein dealing with *Ellis Island*. Unfortunately, many of these files cannot be located in Record Group 85. Mr. George Thomas of Immigration and Naturalization Service is of the opinion that the missing files have been destroyed. Among the vessels engaged as substitutes for *Ellis Island* in 1908 were: *General Putnam* and *Herman Caswell*.

3. Ibid.

4. Ibid.

In February 1909 James Shewan & Son was paid $1,250 for scaling and painting the hull, and adjusting the machinery on the craft's semiannual trip to drydock. When Commissioner Robert Watchorn checked his records he found that in Fiscal Year 1910 it had cost $27,013.77 to operate *Ellis Island*--$6,529.90 for maintenance and $20,483.87 for salaries for the 27 men assigned to keep the vessel operating 18 hours a day. During the year, the pay of deckhands had been raised from $50 to $75 per month.[5]

Damage to the railing at the Ellis Island end of the craft led to a serious accident in 1913, resulting in the death of two persons. While *Ellis Island* was docked at the Barge Office, the railing at that end of the vessel had been smashed by boats of the McAllister Co. backing into it. The railing was replaced, but unknown to the officials the work was executed in a shoddy fashion. On Tuesday, September 9, *Ellis Island*, with Pilot Edward A. McClellan at the wheel, pulled out of the Ellis Island slip at 5:30 p.m. Aboard the ferryboat, in addition to the crew, were about 150 passengers. About 50 of these were on the *Ellis Island* fantail, and unwittingly a number leaned against the rail as they talked. As the vessel chugged by Governor's Island, the rail, without warning, gave way and precipitated five men into the river. One of the men, Michael Gumb, an employee of the Stanley Hoisting Machine Co., was struck by the propeller and killed instantly. Four others, all employees of the Immigration Service (Inspectors Albert Forster, Charles Waldo, and O'Neil, and Interpreter Ernest Stoltzenberg) fought their way to the surface.

---

[5] Ibid.; Acting Commissioner to Commissioner-General, July 11, 1913, I & NS, File 56,026/194. The crew, which was divided into two watches, consisted of: 2 pilots, 3 quartermasters, 12 deckhands (including two dockmen), 1 assistant engineer, 2 oilers, and 5 firemen.

Meanwhile, the cry, "Man Overboard!" had been raised. Pilot McClellan was unable to stop and reverse the boat immediately, as a Standard Oil Corporation tug with a barge was bearing down rapidly. By the time McClellan had turned *Ellis Island* about, four tugboats had arrived on the scene, and the four men were pulled from the water. Efforts to revive Inspector Waldo were futile, however. Several days were to pass before the body of Gumb, badly mutilated, was recovered.[6]

The Immigration Service being judged at fault, private bills were enacted by the Congress granting $1,500 each to the next of kin of Charles Waldo and Michael Gumb, who had lost their lives by drowning, "having fallen overboard when a defective fantail rail gave way."[7]

With the outbreak of World War I at the end of July 1914, the great tide of immigration slackened. The impact of the war was felt immediately at Ellis Island, and was reflected statistically in the years that followed. In Fiscal Year 1914, the last full year of migration, 1,218,480 immigrant aliens were admitted to the United States, 878,052 of them through the port of New York. In Fiscal Year 1915 there were only 326,700 admissions, 178,416 of them through New York. Immigration had been reduced about 75 percent in a single year. As war continued, the numbers diminished, the low point being reached in 1918, when only 28,867 immigrant aliens entered the port of New York.[8]

---

[6] Inquiry Concerning Accident Aboard *Ellis Island* on 5:30 Trip, Tuesday, Sept. 9, 1913, NA, RG85, File 53, 620-216.

[7] HR 10167 and S5488, 63d Congress, March 3, 1915, NA, RG85, File 53, 620-216.

Though the number of passengers were greatly reduced, *Ellis Island* continued to log the same number of miles per week, as she had prior to the war. In January 1916 *Ellis Island* ran afoul a submerged object, breaking one of her propellers, damaging a rudder, and wrecking the tail shaft. Proposals were accordingly invited for her repair.

James Shewan & Son, Inc., was low bidder, and on January 15 agreed to drydock *Ellis Island* and make the following repairs: (a) remove broken propeller wheel and furnish and install a new one of the same dimensions; (b) furnish and install a new rubber, including new bolts, brass bushings, and quadrant bolts; and (c) furnish and install a new tail shaft. Repairs were to be completed within 16 working days, for which the government was to pay the contractor $2,494.[9]

---

[8] Thomas M. Pitkin, "A Report on Ellis Island as an Immigrant Depot, 1890-1954" (unpublished report, 1966) p. 121, National Park Service, files OAHP.

While the ferryboat was drydocked at James Shewan & Son, it was discovered that additional work was required. These extras, for which the contractor was to be paid an additional $836.30, included: (a) new studs to secure the palm; (b) the replacement of deck casting which held the rudder pin to the damaged rudder; (c) the straightening of the tail shaft and refitting of the steering bearings; and (d) for furnishing and fitting one new propeller wheel.[10]

James Shewan & Son had *Ellis Island* repaired and back in operation before the end of January. Nothing out of the ordinary occurred until May 10, when the vessel on her 8:20 a.m. trip from New York struck a submerged log and broke her propeller.[11]

---

9. Agreement, dated Jan. 15, 1916, between James Shewan & Son, and the United States of America, NA, RG85, File 53892/1-A. James Shewan & Son, Inc., was located at the foot of 27th Street, Brooklyn, New York.

10. Acting Secretary to Commissioner of Immigration, April 25, 1916; Howe to Commissioner-General, May 31 and Aug. 31, 1916, NA, RG85, File 53892/1-A. To justify this expense, it was pointed out that when the vessel was drydocked, it was found that the bolts between "the palm of rudder stock and the rudder were loose and the quadrant" which governed the steering from that end of the craft had sagged.

11. Uhl to Commissioner-General, May 13, 1916, NA, RG85, File 53, 892/1-A.

Proposals were immediately invited for effecting repairs. The only bid received was from James Shewan & Son, who would place *Ellis Island* in drydock, remove the broken wheel, and replace it with a new one of the same dimensions. The government would be charged $475 for this work, which would be completed within 24 hours of the time the craft was delivered to the 27th Street Drydock.[12]

Arrangements were made to hire a substitute boat from the John E. Moore Co. for $100 per day, while *Ellis Island* was in drydock. *Ellis Island* was turned over to James Shewan & Son at noon on May 15.[13] The contractors were as good as their bond, and *Ellis Island* was back in operation by noon the next day.

On July 30, 1916, occurred a series of terrific explosions at Black Tom Wharf, on the New Jersey shore, less than one mile from Ellis Island. Some of the flaming barges were carried by a rising tide and a west wind over to Ellis Island, where they set fire to the cribbing of the seawall. Heroic tugboat crews lashed onto them and towed them away before they exploded, and the station escaped complete destruction. The immigrants in the detention quarters panicked, but they were finally calmed and embarked on *Ellis Island* and taken to the Barge Office.

---

12. John L. Curley to Uhl, May 12, 1916, NA, RG85, File 53, 892/1-4. Curley was general manager for James Shewan & Son.

13. Howe to Commissioner-General, May 31, 1916, NA, RG85, File 53, 892/1-A.

Although there were more than 600 people on the island, not a life was lost and there were no serious injuries.[14]

Funds having been allotted for overhauling *Ellis Island,* the Commissioner of Immigration advertised in the principal New York daily newspapers on November 8, 1916, that proposals would be received at his office until 2:30 p.m., on the 16th, for overhauling the ferryboat. As there were "no docking plans in existence," bidders would have to visit the craft, "inform themselves of all governing conditions, take their own measurements if any are required, and include in their estimate, all items of labor and materials required." One drawing had been prepared, under the direction of Chief Engineer Alfred B. Fry, designated "Alteration Details," and dated September 25, 1916. (A copy of this drawing is found in this report.) General character of the detail work was shown on this drawing, but minor modifications could be made with approval of Chief Engineer Fry.[15]

The statement that there were "no docking plans in existence" indicates that in 1916 the Immigration Service did not have detailed construction plans of the ferryboat.

---

[14] Pitkin, "Ellis Island as an Immigrant Station," pp. 133-134.

[15] Specification for all Labor and Materials Required for Docking, Alterations, and Machine Repairs on the Steel Hull Ferryboat "Ellis Island," of the U. S. Immigrant Station, Ellis Island, N. Y. H., NA, RG85, File 53892/1-4.

When Commissioner Frederic C. Howe opened and abstracted the bids, he found that there was only one for overhauling the vessel. James Shewan & Son had bid $17,900 for this work. Five proposals had been received for painting the vessel. They were:

Name & Bidder	Amt. of Bid	Time for Completion
Leonard Miller & Co.	$4,825	26 working days
Thomas J. Curtis	4,866	34 working days
Holzapfels' American Composition Co.	4,975	30 working days
Alex. E. Sheldon	4,995	29 working days
A. H. Canrobert Co.	5,100	29 working days

The lowest bid for painting added to the proposal for alterations came to a figure of $22,725. Experience demonstrated that whenever *Ellis Island* was placed in drydock, extras of about 50 percent of the original bid were found. The available balance for operating the boat in Fiscal Year 1917 was $42,000, and with seven months to go, Commissioner Howe was of the opinion that he could not obligate $30,000 for repair of *Ellis Island*, unless the Department was willing to materially boost the allotment.[16]

As this was unlikely, Assistant Commissioner Byron H. Uhl recommended that the proposals be rejected, and that Chief Engineer Fry be allowed to revise them drastically, "so that nothing except the absolutely necessary items shall be covered, and solicit new proposals." The original specifications (copies of which accompany this report), on which the prospective contractors had figured their proposals, contained nothing that was not highly desirable. It would only be good business to have all the work done at one time, since to neglect it for six or eight months would lead to additional deterioration and increase the ultimate cost. If the Commissioner-General agreed with this logic and was prepared to increase the allotment, the bids of James Shewan & Son and Leonard Miller & Co. were to be accepted.[17]

---

[16] Frederic Howe had replaced Watchorn as Commissioner of Immigration for the Port of New York in 1914.

The Commissioner-General was unable to get the allotment increased, and Assistant Secretary of Labor Louis F. Post telegraphed Uhl "to reject all proposals, and, after revising the specifications, to solicit new ones."[18]

Chief Engineer Fry, in seeing that the specifications were altered, laid down guide lines: (a) all painting was to be eliminated, except for the steel hull; and (b) to reduce the items of "machine repairs to the work absolutely necessary, and permit the other repairs of this nature [to] carry over to July 1917, when it may be possible to secure a lower price by docking the craft at the Brooklyn Navy Yard."[19]

---

[17] Uhl to Commissioner-General, Nov. 20, 1916, NA, RG85, File 53892/1-A.

[18] Post to Uhl, Nov. 21, 1916, NA, RG85, File 53892/1-A.

[19] Fry to Commissioner of Immigration, Nov. 20, 1916, NA, GR85, File 53892/1-A.

The revised specifications (see Appendix B) deleted all references to the alterations proposed originally and shown on the plan dated September 25, 1916.[20] Five proposals submitted, in accordance with revised specifications, were opened at 2:30 p.m. on December 4. Acting Commissioner Uhl, on abstracting the five bids, found that the Brooklyn Navy Yard had submitted the low proposal. The Navy Yard people were willing to do the work required for $3,576, and to have it completed in 15 working days.[21] Assistant Secretary Post on December 6 authorized Uhl to accept the proposal of the Brooklyn Navy Yard for "repairing and painting the ferryboat Ellis Island for $3,576, plus five cents per square foot for scaling vessel."[22]

When the people from the Navy Yard examined *Ellis Island*, they found that certain extras would be involved. If the vessel were to

---

[20] Specifications for all labor and materials required for docking, cleaning, painting and machine repairs on the steel hull ferryboat "Ellis Island," of the U.S. Immigrant Station, Ellis Island, N.Y.H., NA, RG85, File 53892/1-A.

[21] Uhl to Commissioner-General, Dec. 5, 1916, NA, RG85, File 53892/1-A. Other bids submitted were:

Name	Amt. Bid	Completion Time
Theo. Smith & Son Co.	$ 4,494	30 working days
James Shewan & Son	12,790	20 working days
Jas. Tregarthen & Sons	13,575	24 working days
John W. Sullivan Co.	14,250	25 working days

[22] Post to Uhl, Dec. 6, 1916, NA, RG85, File 53892/1-A.

be scaled, it would be necessary to remove the oak chafing strip of the guard rail, renew, and secure it. In addition, it was likely that the guard rail would have to be replaced. It was estimated that the painting and scaling would cost $682.50, and the removal and restoration of the chafing strip, another $162. Uhl's request for funds for the extra work was approved on December 21.[23]

During the 15-day period that *Ellis Island* was in drydock for repairs, the ferryboat *Keansburg*, rented from the Keansburg Steamboat Co.,provided service to and from the Battery to the Immigration Station.[24]

When the United States entered World War I, in April 1917, crews from the German ships tied-up in New York Harbor and New London, Connecticut, were rounded up and transferred to Ellis Island for internment. A detachment of soldiers was detailed by the War Department to guard the merchant sailors. In addition to the interned German crews, Ellis Island became host to a number of enemy aliens arrested on warrants by the Department of Justice.

Both the War and Navy Departments stood ready to take over Ellis Island from the day the United States went to war. After the interned sailors and aliens were transferred, the Ellis Island hospital was taken over by the Medical Department of the U. S. Army. The navy took over the baggage and dormitory building, along with considerable space in the main building. After the armed services had moved onto the island in force, the inspection of arriving aliens was conducted by the Immigration Service on board ship or at the steamship piers.[25]

---

[23] Uhl to Commissioner-General, Dec. 18, 1916, NA, RG85, File 53892/1-A.

[24] Uhl to Commissioner-General, Nov. 5, 1916, NA, RG85, File 53892/1A. The Keansburg Steamboat Company rented their vessel to the Immigration Service for $60 per day, the fee to include the services of the captain and engineer. In the summer, *Keansburg* (which was 175 feet long, 50 feet wide, and licensed to carry 820 persons) had operated as an excursion boat from the Battery Wall.

Ellis Island continued to ply the waters between the Barge Office and the island. Instead of immigrants, she now transported members of the armed services, along with the limited number of employees of the Immigration and Public Health Services still based on Ellis Island. Semiannual trips to drydock were still required, and in 1918 there were protracted negotiations with the National Federation of Federal Employees over a wage increase for the deckhands.[26]

---

25. Pitkin, "Ellis Island as an Immigrant Station," pp. 134-137.

26. Ellis Island "Ferry" Card Index, NA, 54, 295-Gen.

CHAPTER III

Maintenance of the Craft, 1918-1945

The use of Ellis Island by the military came to an end in 1919, the navy relinquishing its quarters at the end of March and the army returning the hospitals at the close of the fiscal year. In Fiscal Year 1919, $4,542.37 was charged to the account for maintenance and repairs to *Ellis Island*. Records as to the expenses incurred in drydocking the ferryboat in Fiscal Year 1920 are missing.

In 1921 it was proposed by the Immigration Service to spend a considerable sum on the ferryboat. Besides the biannual scaling, cleaning, painting, and machine repairs, there would be alterations to *Ellis Island's* superstructure. As there were no docking plans, interested parties would be compelled to visit the boat and "take their own measurements." Two drawings had been prepared by Civil Engineer Frank S. Howell and approved by Chief Engineer Fry on April 1, 1921, showing a plan of the sections and maindeck. (Copies of these drawings are found in this report.)

Alterations to the ferryboat's superstructure consisted of: (a) removal of the exterior stairway (marked "A" on the drawing) and handrail; (b) removal of brass handrail with stanchions, woodrail, chain, brass guard plate and iron braces on upperdeck where exterior stairway commenced; (c) removal of decking, deck beams, and seats where necessary to form hole for stairway marked "C" on drawing; (d) removal of a seat with heating coils on lower deck underneath new stairway, and window and portion of deckhouse to make room for stairway; (e) removal of seats with heating coils inside of new toilets located between doorway and outside wall of deckhouse and alongside of same; (f) removal of all partitions, berths, floor, tiling, heating coils, toilet fixtures, etc., for engineer's, pilot's and quartermaster's cabins, locker-room, washroom, and toilets; (g) removal of coal hole and ventilating covers marked "D"; (h) removal of wooden flooring of entire maindeck; (i) removal of part of deckhouse and bulkhead marked "H" to make room for larger doors; and (j) removal of doors marked "I".

New work was to consist of: (a) patching and repair of upper deck where outside stairs had been removed;(b) installation of new seat with wire mesh railing at "B"; and at "C" a new stairway would be installed from lower- to upper-deck. This stairway was to be built of seasoned white oak, with a handrail of polished brass. (c) The partitions for the enclosure under the stairs and the two toilets was to be built of 2" x 4" studs of spruce or cedar, spaced about 6" on centers. The studding for the two toilets was to be sheathed and paneled on both sides to match the present paneling. (d) The enclosure underneath the stairs was to be sheathed and paneled on the outside. On the floor line on the outside the partitions were to have 6" oak base. (e) The doors with trim and hardware were to be salvaged from the best of the doors that had been removed. (f) The door marked "G" was to be new and of 6' 6" x 7' 10" or of the same height and style as the present doors. (g) Plinth blocks and hardware were to be new. (h) Two small windows, 10" wide and matching in height the glazed part of the door marked "K" in the end bulkhead,were to be positioned next to near stairway "C". (i) Where beams in the upperdeck had been cut to make room for the new stairway, they were to be re-framed. (j) The four new doors marked "K" were to be of "Garage Door" pattern of the "Slidetite" type with hardware of the Richardson-Wilcox Mfg. Co. (k) New benches would be installed where cabins, toilets, etc., had been removed. (l) Where cabins, etc., had been removed, the contractor was to put in new panels, where required by Chief Engineer Fry. (m) Eleven new 3" diameter pipe columns with base flanges and caps were to be installed. (n) The tank for drinking water was to be relocated. (o) The old range pole was to be removed, altered, and repositioned. (p) And finally the contractor was to install at the point marked "C", on drawing two, a coal hole.[1] (A copy of "Specifications for all Labor and Materials Required for Docking, Scaling, Cleaning, Painting, Alterations, and Machine Repairs on the Steel Hull Ferryboat 'Ellis Island'" is found in Appendix C.)

---

[1] "Specifications for all Labor and Materials . . . ," NA, RG85, 54969/25A.

Invitations soliciting proposals were circulated, and the bids were opened and abstracted by the Commissioner of Immigration at 2:30 p.m. on May 20. James Shewan & Son , Inc., was found to have submitted a low bid of $21,750. On June 13 Shewan & Son posted the required performance bond and signed the contract.[2]

This work was done in the fall of 1921 at James Shewan & Son's Brooklyn drydock. Undoubtedly, many extras were required by the Steamboat Inspection Service, because the cost of maintenance and repairs for *Ellis Island* in Fiscal Years 1921 and 1922 totaled $85,881.36. This figure was slightly less than the cost of the ferryboat to the government in 1904.

Commissioner Robert E. Tod in August 1922 learned that continuous use made it mandatory that "certain repairs to machinery, scraping and painting of the hull and readjustments, and replacements" be made to *Ellis Island*, without delay. Specifications were accordingly drawn and circulated. On September 20 the proposals were opened and abstracted. Three of the proposals (those of Verdun & Co., Inc.; James Shewan & Son; and W. & A. Fletcher & Co.) had not been presented until 3:03 p.m., whereas the time stipulated in the announcements was 2:30. They blamed their discomfiture on a misunderstanding of the time of the departure of *Ellis Island* from the Barge Office. They had assumed the vessel left at 2 p.m., but the schedule had been changed and she now cast-off at 1:45.

---

[2] Ibid.

The low bid of the five offered and opened at 2:30 was that of Clinton Dry Docks, Inc., "in the amount of $4,690, covering docking, scaling, painting, etc., $10.00 each for such boiler tubes as may be found necessary, and $200.00 each for propeller wheels, if any be found necessary after docking of the vessel." Unless the Department of Labor felt that the bid of James Shewan & Son could be accepted with "justice and propriety," Tod recommended the contract be awarded to Clinton Dry Docks, Inc.

While *Ellis Island* was undergoing repairs, the Immigration Service would have to charter another craft. When the required proposals were received, they would be forwarded to Washington with appropriate recommendations. The substitute boat would have to be called to provide 18 hours service a day.

As he considered *Ellis Island* part of "our plant," Tod suggested that the expenses incurred in effecting repairs be charged to the "Special Appropriation for remodeling and renovating buildings and plants."[3]

---

[3] Tod to Commissioner-General, Sept. 22, 1922, NA, RG85, File 54909/25B. Tod had replaced Frederick A. Wallis as Commissioner of Immigration for the Port of New York in October 1921.

Commissioner-General Husband on the 25th granted Tod authority to accept the bid of Clinton Dry Docks, Inc. At the same time, he advised that the word "plant" could not be construed as covering repairs to the ferryboat. Repair of the craft would therefore have to be charged against the appropriation for "Expenses of Regulating Immigration."[4]

Proposals had also been received from four shipping companies for renting the government a substitute boat, while *Ellis Island* was laid-up. Deputy Commissioner Uhl recommended the acceptance of the bid of the Keansburg Steamboat Co. of $275 per day for the rent of the steamboat *Mobjack*, with a capacity of 950 passengers. The low bid of Mills Bros. had been rejected, because their vessel, *Squantum*, was licensed for only 550 passengers. On September 30 Tod was authorized to rent *Mobjack*.[5]

Ellis Island was taken into drydock in October. When the engines were taken down, it was seen that one of the cylinders was pitted, and it was rebored by the machinists at Clinton Dry Docks.[6] The inspector from the Steamboat Inspection Service, on checking the machinery, required one of the boiler tubes to be re-rolled and three feet of boiler seam on the principal Scotch Boiler to be caulked before he would pass them.[7]

---

[4] Husband to Tod, Sept. 25, 1922, NA, RG85, File 54969/25B.

[5] Uhl to Husband, Sept. 28, 1922, and Asst. Commissioner-General to Tod, Sept. 30, 1922, NA, RG85, File 54969/25B.

[6] Tod to Commissioner-General, Oct. 27, 1922, NA, RG85, File 54969/25B. The charge for reboring the cylinder added an extra of $130 to the bill.

In Fiscal Year 1923 only one trip to the drydock was made, and maintenance and costs of repairs to the ferryboat were cut drastically. Whereas in Fiscal Year 1921 repairs to *Ellis Island* had totaled $46,203.69 and in Fiscal Year 1922 $39,677.67, they were reduced in Fiscal Year 1923 to $4,977.10.

Ellis Island made several trips to drydock in Fiscal Year 1924. Two of these were the semiannual visits made for scaling, cleaning, and painting the hull, and adjustments to her machinery. The cost of repairs and maintenance in Fiscal Year 1924 increased four-fold to $18,833.[8]

Three trips were made by *Ellis Island* to drydock in Fiscal Year 1925. Two of these were the biannual ones required by the Steamboat

---

7. Tod to Commissioner-General, Nov. 4, 1922, NA, RG85, File 54969/25B. For this work Clinton Dry Docks was paid an extra $45.

8. When *Ellis Island* was to be drydocked for repairs in November 1923, the Commissioner-General authorized the expenditure of $3,000 for engaging a substitute boat "to operate and maintain a ferry schedule between New York City and Ellis Island." Low bidder was John E. Moore Co. which would be paid $250 per day for their boat *Thomas C. Millard.* Curran to Commissioner-General, Sept. 30, 1923, NA, RG85, File 55, 174-220. Henry H. Curran had replaced Tod as Commissioner of Immigration for the Port of New York in the summer of 1923.

Inspection Service for the vessel to have her hull scaled, cleaned, and painted, and her machinery checked. On her autumn trip to the drydock, the vessel received two new cylinder castings, complete, for steering engines Nos. 3346 and 3347, supplied by the American Engineering Co. of Philadelphia. These engines, which were received "fully machined, assembled, and ready for installation and connection to old crossheads and eccentrics rods," cost $970.[9]

An emergency trip to a drydock was necessitated when the craft on January 30, 1925, encountered a "heavy ice floe" and lost one propeller and had her rudder damaged. An estimate indicated that repairs would total $1,000, and Commissioner Henry H. Curran telegraphed Washington for authority to expend a sum not to exceed that figure.[10] As soon as he received a reply in the affirmative, Curran made arrangements with John Sullivan Co. to employ one of its tugs to tow the crippled ferryboat to the drydock at Communipaw. *Ellis Island* was out of service one day as the propeller was replaced and the rudder repaired. While the vessel was laid up, a substitute boat was chartered from John E. Moore for $250.[11]

---

[9] Husband to Commissioner of Immigration, Aug. 2, 1924, NA, RG85, File 55, 174-230.

[10] Curran to Commissioner-General, Jan. 30, 1925, NA, RG85, File 55, 174-220.

[11] Sullivan to Commissioner of Immigration, Jan. 30, and Baker to Commissioner-General of Immigration, Feb. 4, 1925, NA, RC85, File 55, 174-220. Clinton Dry Docks, Inc., had submitted a lower bid than John W. Sullivan Co. for repairing *Ellis Island*, but the former was unable to provide

On March 2, 1925, the Commissioner-General prepared his estimate of what it would cost to operate *Ellis Island* in Fiscal Year 1926. Available figures for the past several years indicated that the following sums should be budgeted:

To annual salary cost of crew	$64,000
To coal	23,000
To minor repairs and parts as needed	500
To lubricants	750
To hire of substitute boat while *Ellis Island* was in drydock for repairs and maintenance	5,000
	$93,330

To this figure would have to be added a charge for the biannual and emergency trips to drydock. In Fiscal Year 1925, the two regularly scheduled visits to the drydock and the emergency trip had cost the service $31,084. As this had been in excess of any years, except 1921 and 1922 when the charge included extensive alterations to the craft, the Commissioner estimated that $25,000 in this account should suffice. With the addition of this figure, the estimated cost for operating *Ellis Island* in Fiscal Year 1926 would be $118,330.[12]

Plans were made to drydock *Ellis Island*, as soon after Labor Day as possible, to make necessary repairs, repaint the hull, and overhaul machinery and boilers. A new propeller would be required to replace the

---

any assurance as to when the boat could be handled, "due to the condition of their dry dock, and not having" a propeller of the desired diameter and weight in stock. John W. Sullivan, however, had propellers on hand and was equipped to drydock *Ellis Island* immediately.

12. Commissioner of Immigration to Commissioner-General, March 2, 1925, NA, RG85, 55, 174-220.

one at the Ellis Island end of the craft.[13] Before bids were solicited for drydocking the vessel, proposals were invited for renting a substitute boat. Proposals were received from the Keansburg Steamboat Co. and John E. Moore Co. for the rent of vessels. At the same time, Frank H. Phipps, Area Coordinator for the War Shipping Administration, offered to place at the Immigration Service's disposal the ferryboat *Hancock*, currently the property of the War Department and berthed at Governor's Island. *Hancock* had a capacity of 300, and could be called on, in emergencies, to transport 50 to 100 more persons. If *Hancock* were used by the Service, one engineer and a fireman would accompany her.

One of Phipps' people had checked the landing at the Barge Office, and he reported that the maximum persons transported on any run was 367. Consequently, Phipps was unable to understand the necessity of securing a vessel with a capacity of 800 persons, as indicated in the announcement.[14]

Assistant Commissioner Uhl, in recommending against use of *Hancock* by the Service, observed that she had no open space on her maindeck from fantail to fantail for accommodation of supplies and baggage. If any of these were taken aboard, it would restrict the space available for passengers "on whichever fantail it may be placed and can only be satisfactorily handled by turning the boat end for end upon arrival at the ferry slip." Indeed, the Service had tried *Hancock* on two previous occasions, when *Ellis Island* was tied up for emergency repairs, and no baggage or supplies were handled unless they were high priority items. On the last occasion, it had been found necessary to secure from the United States Shipping Board, a large tug to assist for several hours in handling the ferry traffic.

---

[13] Uhl to Commissioner-General, Aug.7, 1925, NA, RG85, File 55602-457.

[14] Phipps to Commissioner of Immigration, Sept.11, 1925, NA, RG85, File 55602-457. A check of the 8:45 a.m. trip to Ellis Island showed 335 passengers; the 11:15 a.m. run from Ellis Island 71; the 11:45 a.m. to Ellis Island 50; the 3:15 p.m. from Ellis Island 188; and the 4:40 p.m. from Ellis Island 467.

In addition, the Coordinator's proposal called for the Immigration Service to provide deckhands to man the craft, while the War Department provided but one engineer and a fireman. Normally, members of *Ellis Island's* black gang, when the vessel was in drydock, were turned to assisting the Chief Engineer in undertaking such projects, involving the overhaul of machinery, as not incorporated into the specifications. Deckhands at the same time were detailed to clean, scrape, and paint the superstructure of the vessel. Uhl therefore was opposed to accepting the proposal of the War Shipping Board and recommended that the low bid for a substitute boat submitted by John E. Moore Co. be accepted.[15] The Commissioner-General agreed, and a contract was signed for the charter of *Mobjack*.[16]

---

[15] Uhl to Commissioner-General, Sept. 15, 1925, NA, RG85, File 55, 602-457. The steamer *Keansburg*, owned by the Keansburg Steamboat Co., was a passenger and freight carrying craft, 175 feet long, with a 29-foot beam to 50 feet over-all. She was licensed to carry 850 passengers and over one-half of her maindeck had space for carrying freight. She was

Meanwhile, the Immigration Service had accepted the proposal of James Shewan & Son for scaling, cleaning, and painting the hull, and adjusting the ferryboat's machinery. While *Ellis Island* was in drydock, she was inspected by personnel of Steamboat Inspection Service. The hull Inspector, after checking the plating, informed Chief Engineer Fry that "a considerable portion of the [plating] of the port side of the vessel" would have to be renewed, along with "some portions" of the bottom and starboard quarter.

After the plates marked for replacement had been drilled, Chief Engineer Fry inspected the bottom of *Ellis Island*. He found that

> since she was docked last year, that she had evidently several times struck heavy drift or submerged obstructions, the waters of this harbor being notably encumbered by old timbers, piles, and so forth, some of which float well submerged and cannot be avoided, particularly at night.

The drilled plates recommended for removal "showed a wasting of from fifty to sixty per cent, the original thickness of the bottom

---

able to carry several hundred tons of freight, and was "fully equipped for taking care of passengers, having electric lights, steam heat, toilets and staterooms." The steamer *Mobjack*, the property of John E. Moore Co., was a passenger and freight steamer, 175 feet in length, with a 29-foot hull to 50 feet over-all. She was licensed to carry 950 passengers and one-half of her maindeck was designed to haul freight. She was fully equipped for taking care of passengers, having electric lights, steam heat, toilets, and staterooms." William A. Gehlhous to Curran, Aug. 31 1925, NA, RG85, File 55, 602-457.

[16] Hull to Uhl, Sept. 22, 1925, NA, RG85, File 55, 602-457.

plates being from 3/8 to 7/16 and these plates being wasted so," there remained but a thickness of 5/32 to 3/16. In view of her mission and her age, 21 years old, and that submerged drift was a constant peril, as well as the ice floes encountered in the late winter, Fry was compelled to agree with the personnel of the Steamboat Inspection Service. He concluded that "it would be taking an undo risk to continue to operate her without the renewal of hull plating . . . and without the strengthening of certain butts and seams and one propeller arch by electric welding."

Besides the hull work recommended, the local inspectors had urged that one tail shaft be replaced. When Fry looked at the tail shaft, he saw that it was "badly wrung and corroded around the outboard sleeve," and he agreed that this would also have to be billed as an extra to insure the vessel's safety. The other tail shaft was pronounced in fair condition, the "only notable defect being a small crack near the Key-way on outboard end." The new tail shaft would add $1,750 to the amount due Shewan & Son.

The Scotch Boilers appeared, despite their age, to be in good condition. A test of the condenser demonstrated that only one tube required replacement. [17]

---

[17] Fry to Commissioner of Immigration, Oct. 3, 1925, NA, RG85, File 55, 596-326.

Despite the extras (the renewal of hull plates and tail shaft), only $13,835.05 was charged to repairs and maintenence of *Ellis Island* in Fiscal Year 1926.

During the year, the vessel acquired a third lifeboat. In accordance with the recommendations of the Steamboat Inspection Service, a metallic lifeboat (12 feet long with a four-foot, five-inch beam) was purchased for $155 from C. C. Balbraith & Son, Inc.[18]

The cost of maintenance and repairs to the ferryboat in Fiscal Year 1927 more than doubled to $30,357.54. In the ensuing fiscal year these charges dropped to $17,656.87. A trip to drydock in the latter year was necessitated by a collision with the Coal Barge *Eureka* # 66, belonging to Berwind White Coal Mining Co. To repair the damage suffered in the collision cost the government $382.

On June 30, 1928, occurred an incident that emphasized the rising cost of repairs and the need for prompt action in renting a substitute boat. *Ellis Island* on that evening struck a submerged object and broke her righthand propeller wheel at the New York end of the craft. Commissioner Benjamin M. Day wrote the Commissioner-General for authority to solicit bids for the repair of the damage and to rent a boat to take over the route while the ferryboat was in drydock. With the expansion of government and a great increase in the volume of mail, the letter remained on a clerk's desk several days after its arrival in the Bureau before it reached Commissioner-General Hull's desk.[19]

---

[18] Hull to Commissioner of Immigration, Dec. 30, 1925, NA, RG85, 55, 596-326. The other two lifeboats were 16-footers.

Hull, on reading the report, granted Commissioner Day authority to solicit bids for a new propeller and to dock *Ellis Island.*[20] Six proposals for the work were received and opened at the designated hour --2:15 p.m. on July 5. Abstracting the proposals, Commissioner Day found that the bid of Todd Dry Dock Corp. was low; their time for completing the work was five days. This left a margin of four days in favor of John W. Sullivan Co., which figured at the current charge for a substitute boat for time involved came to $1,160. Boats could not be hired for less than one day, so this made it impossible to accept the proposal of James Shewan & Son. Commissioner Day accordingly recommended that the bid of John W. Sullivan Co. be accepted.[21]

---

[19] Day to Commissioner-General, July 5 and Hull to Day, July 18, 1928, NA, RG85, File 54969-25.

[20] Ibid. The broken propeller had the following dimensions: diameter 7' 2", pitch 10", width of blade 38", and bore taper 7 3/8" to 6 1/4".

[21] Day to Commissioner-General, July 5, 1928, NA, RG85, File 54,969-25. As abstracted by Day the six bids received were:

Firm	Price	Length of Time to do Work
Todd Dry Dock Corp.	$318	5 days
John W. Sullivan Co.	345	1 day
James Shewan & Son	425	1/2 day
Tietjen & Lang Dry Dock Co.	345	5 days
Robbins Dry Dock & Repair Co.	360	5 days
Morse Dry Dock & Repair Co.	539	7 days

In soliciting proposals for a substitute boat, Commissioner Day announced that landings were made in racks. The rack at Ellis Island would accommodate a vessel 160 to 200 feet long with a narrow fantail, while the rack at the Barge Office was somewhat larger. *Ellis Island* had good speed and was capable of making the round trip, including stops for unloading and loading, at each terminal, within one hour. Trips would begin from Ellis Island at 6:20 a.m. and terminate from the Barge Office at 12:30 a.m.

The low bid for a satisfactory substitute boat was submitted by Mills Bros. and called for $290 per day. Commissioner-General Hull on July 9 granted Commissioner Day authority to accept the proposal of John Sullivan Co. for repair of *Ellis Island* and Mills Bros. for rent of a substitute boat.[22]

The delay in receiving permission to put *Ellis Island* in drydock had resulted in damage to a bearing at the Ellis Island end of the craft. John E. Sullivan was also given the contract for replacing the bearing at an additional $250. To avoid costly delays in the future, Commissioner-General Hull urged Commissioner Day to see that letters requesting authority to contract for emergency repairs to the ferryboat be tagged "special" or "urgent."[23]

---

[22] Day to Commissioner-General, July 5, and Hull to Day, July 9, 1928, NA, RG85, File 54969-25.

[23] Hull to Day, July 18, 1928, NA, RG85, File 54969-25.

In Fiscal Year 1929 repairs and maintenance costs for *Ellis Island* totaled $23,001.85. The next fiscal year found the government disbursing $30,026.45 for the boat's up-keep, while in Fiscal Year 1931 expenses for repairs and maintenance were cut to $24,091.32.

Ellis Island in the fall of 1930 had to be drydocked after a collision with the barge *M. M. O'Brien*. While laid-up for her biannual overhaul, a number of hull plates and boiler tubes were replaced.

On June 8, 1932, it was determined to convert *Ellis Island* from a coal- to an oil-burner. The Brewer Dry Dock Co. was awarded the contract for this project. Consequently, in the autumn of 1932 the vessel was drydocked, the fire boxes removed, and replaced with oil-burners. For the work, Brewer Dry Dock Co. was paid $56,678.[24] Other charges for maintenance and repairs necessary to enable the Steamboat Inspection Service to vouch for the vessel's safety aggregated an additional $34,744.15 in Fiscal Year 1932.

As to be anticipated, after the heavy expenses for maintenance and repairs in Fiscal Year 1932, charges for the boat's up-keep in the ensuing fiscal year dropped to $2,545.54, the lowest figure for any year since 1920. Maintenance costs for *Ellis Island* zoomed in Fiscal Year 1934 to $41,865.71, dropped in Fiscal Year 1935 to $17,110.77, and skyrocketed in Fiscal Year 1936 to $74,742.50.

---

[24] Sweet to Commissioner, March 19, 1938, NA, RG85, File No. 54 969-25.

The continuing high cost of maintenance was a source of concern to the Immigration and Naturalization Service. On January 25, 1937, an official, W. H. Wagner, wrote the Bureau of Marine Investigation & Navigation (the successor to the Steamboat Inspection Service) and pointed out that *Ellis Island* had been in "constant operation" since 1904, except when laid-up for repairs. During the past 18 years in excess of $500,000 had been expended on her for "repairs and replacements." It was therefore desirable for the Marine Investigation Service to undertake a thorough examination of the craft and "advise this office whether further extensive repairs are justified and the approximate cost thereof, and whether . . . the boat should be replaced."[25]

James Smith of the Bureau of Marine Investigation spent February 2 on the vessel. He found *Ellis Island* in a "seaworthy condition subject to annual dry docking and repairs." The only repairs currently required were "ordinary annual running repairs, and when completed the vessel will be seaworthy for continued service." She had been in continuous operation since the autumn of 1935, and the proposed trip to drydock for a general overhaul of machinery and hull was "considered to be normal and in conformance with good practice." Smith was willing to go on record that "the present condition of *Ellis Island* does not warrant her replacement."[26]

---

[25] Wagner to Bureau of Marine Investigation & Navigation, Jan. 25, 1937, I & NS, File 55812-712A.

[26] Smith to Commissioner of Immigration & Naturalization, Feb. 2, 1937, I & NS, File 55812-712A.

Satisfied as to the vessel's overall condition, the Immigration Service ordered *Ellis Island* into drydock. With only one trip to the yards for a general overhaul in Fiscal Year 1937, maintenance charges for that year were held at $40,898.05, about $34,000 less than during the preceding 12-month period.

Typical of the difficulties encountered by the Immigration and Naturalization Service in keeping *Ellis Island* operating were those experienced in the late summer of 1937. On May 17 it was announced that on June 2 at 10:15 a.m. sealed proposals would be opened by the Commissioner of Immigration in his Ellis Island Office "for all labor and materials required for docking, scaling, painting, alterations and machine repairs on the steel hull ferryboat Ellis Island." Specifications (a copy of which are found in Appendix D) for the projected work were made available to prospective bidders. The contract was awarded to Brewer Drydock Co. on its proposal of $23,710.[27]

A substitute boat having been secured, *Ellis Island* entered drydock on August 23. The work was to be completed on or before September 5. When the craft was out of water, she was inspected by personnel from the Bureau of Marine & Navigation. They found that certain work not covered in the contract "must be done" on the vessel. These ten extras, which would cost an additional $16,028, included such items as:

---

[27] Uhl to Commissioner-General, undated, I & NS, File 55, 812-712A.

(a) for removing old rivets, and installing new rivets in hull, not to exceed 6,000 at $1.45 each, $8,700; (b) for renewal of 14 lower and three vertical guard stringer plates at $275 each, $4,675; (c) to remove 220 lineal feet of good double guard, scale the vertical guard stringer plate in the way of this wood guard and then replace the wood guard--220 lineal feet--$990; and (d) furnish and install a new propeller wheel for the New York end of the vessel--$315. (A report on these ten extras and their cost is found in Appendix E.)

As the vessel was in drydock, it would be impossible to secure competitive bids for the extras involved. District Director Byron Uhl therefore requested authority on August 27 from the Acting Commissioner of Immigration & Naturalization to "charge this expenditure to the Appropriation for Immigration Stations, 1938." Assistant Commissioner W. H. Wagner to whom Uhl's letter was referred gave his approval.[28]

Three days later, personnel of the Bureau of Marine and Navigation recommended additional repairs costing $8,888.50. Included in these extras would be: (a) $4,258.50 for the renewal of seven angle shell frames, 25 angle shell reverse frames, 12 connecting clips, and one side stringer angle, and the removal and renewal of 128 square feet of cement; (b) $1,925

---

28. Uhl to Acting Commissioner, Aug. 27, 1938, I & NS, File 55, 812-712A. In the summer of 1933 the Immigration and Naturalization Bureaus had been merged. District No. 3 to which Ellis Island was assigned included southern New York and northern New Jersey. The district was administered by a District Commissioner.

for the removal and replacement of five hull plates; and (c) $1,650 for the replacement of 6 additional lower guard plates. (A report on these extras and their cost is found in Appendix E.) Once again, it would be uneconomical for the Service to secure competitive bids for this work. In response to a request by Uhl, Wagner telegraphed authority to proceed.[29]

Assistant Commissioner Wagner on September 3 was shocked to receive a letter from Uhl, dated the previous day, reporting that "continuation of the examination being made by the Local Department of Commerce, discloses that additional work must be done on the ferryboat." Uhl again assured his superiors that "no portion of the work mentioned could have been foreseen or determined prior to drydocking the vessel, and it is not practical to obtain competition for the extra work involved." Chief Engineer Munster had vouched that the prices listed by the people at Brewer Dry Dock were not excessive. Included in these extras which totaled $39,610 were: (a) $6,875 for the removal and replacement of 25 stringer plates; (b) $2,736 for renewal of guard stringer angle; (c) $365 for the removal and replacement of "deteriorated sea chest;" (d) $1,960 for removal and renewing of eight deck plates; (e) $940 for renewal of boiler-room casing plates; (f) $1,470 for removal and replacement of six underneath deck plates; (g) $10,530 to replace with new, and remove old, angle deck beams; (h) in connection with item (g) "260 lin. ft. of 4" x 14" margin planking must be removed and replaced, new where required," to cost $3,120; (j) $1,260 to remove and replace 1,260 square feet of house siding" in the way of the removed margin planking;" (k) in connection with item (j) "4,760 lin. ft. of 3 x 4" decking must be removed and renewed, and be properly fastened and caulked" to cost $3,570; (l) 1,960 square feet of asphalt decking to be torn up and replaced for $2,156; and (m) $375 to remove and replace the seats and heater pipes on the port and starboard beams of the craft. (A report on these extras and their cost is found in Appendix E.) To undertake this work, the contractor would require a ten-day extension.[30]

---

[29] Uhl to Acting Commissioner of I & NS, Aug. 30, 1937, I & NS, File 55, 812, 712A.

Before Wagner could act on Uhl's letter of September 2, he received a communication dated September 9 submitting another list of extras recommended by personnel of the Bureau of Marine and Navigation. Among these extras to cost $12,760.35 were: (a) the removal and replacement of 3,682 rivets at $1.45 each to cost $5,338.90; (b)$2,790 to remove and renew 31 reverse frames; (c) $783 for removing and renewing the stringer angle; (d) $450 to replace one web plate eaten through and corroded; (e) $215 to renew watertight door leading to peak compartment; and (f) $433.20 to caulk 722 feet of shell seam. (A report on these extras and their cost is found in Appendix E.) The people in Wagner's office, after considerable discussion, agreed to go along with all the extras except the one calling for the removal and replacement of 3,682 rivets to cost $5,338.90. The sum to be expended on this item would be cut to $1,450.[31]

---

[30] Uhl to Acting Commissioner I & NS, Sept. 2, 1937, I & NS, File 55812-712A.

On September 16 Commissioner James L. Houghteling telegraphed Uhl to contract with the Brewer people for the extras listed in the letters of September 2 and 9 to cost $46,372.35.[32]

These extras would add to the sum obligated for hire of the substitute boat. The original contract had provided that *Ellis Island* would be drydocked a maximum of 14 days to begin on August 23. When an agreement was reached with Brewer Dry Dock on the extras, an extension was provided. By the time the work was completed and the vessel inspected and passed by the Bureau of Marine and Navigation, October 7 had arrived.[33]

Several members of the House Subcommittee on Appropriations, when they discussed the Department of Labor's proposed budget for Fiscal Year 1940, expressed concern about the high cost of repairs to *Ellis Island.* The Congressmen had learned that in excess of $500,000 had been spent in the period since 1919 for repairs to a craft that had cost about $100,000 in 1904. The chairman of the subcommittee suggested that a study be undertaken by the Immigration and Naturalization Service to determine the advisability of replacing *Ellis Island* with a new boat upon which maintenance costs would not be so high. On checking the records, the Commissioner

---

31. Uhl to Commissioner I & NS, Sept. 9, 1937, I & NS, File 55812-712A.

32. Houghteling to Uhl, Sept. 16, 1937, I & NS, File, 55, 812-712A.

33. Uhl to Commissioner, October 1937, I & NS, File 55,812-712A.

reported that the wages for the crew cost the Service $62,800 per year;[34] the average annual cost of repairs (based on the total cost of repairs for the last ten years) was $36,785; the average annual rental of a substitute boat while *Ellis Island* was laid-up over the past decade was $5,345; and the cost of fuel oil for the year averaged $15,000.[35] Thus the current annual operating cost of the boat was $120,000. The cost of *Ellis Island*, when new, the Commissioner observed, was $103,848.50.

At present, the Service had 450 employees on Ellis Island and the Public Health Service another 273, for a total of 723. Besides the employees, *Ellis Island* transported aliens and visitors. Her maximum capacity per trip was 600 passengers and her 10-man crew, plus baggage and freight on her maindeck.

Wagner had contacted Comdr. F. A. Hunnewell, the Coast Guard's chief naval constructor, to secure cost figures for building a vessel to replace *Ellis Island*. Hunnewell believed a new boat would cost from $400,000 to $450,000. Moreover, he continued, "a slight difference in length over all wouldn't make enough difference in the cost to justify a reduction in length, if economy were the only reason for change." Hunnewell was of the opinion that a boat with a length of 160 feet "was not too large for the work in New York Harbor." Three firms (Pusey & Jones, J. H. Mathis Co., and United Shipyards) were recommended as capable of building the type craft desired should Congress make the necessary appropriation.[36]

---

[34] Employed on the vessel were: five marine engineers at $13,800, seven marine firemen at $13,380, 12 deckhands at $20,000, and five pilots at $15,000 per year.

[35] In Fiscal Year 1938, *Ellis Island* had consumed 9,224 barrels of fuel oil and 1,296 gallons of lubricating oil.

When the Commissioner reported to Secretary of Labor Frances Perkins, he pointed out that "based on present wage scales, a new boat of approximately the same dimensions and tonnage as the present craft will cost about $475,000." Ferryboat men, familiar with conditions in New York Harbor, had assured the Service that a craft of similar dimensions would be required to combat the storms and ice floes encountered. A smaller vessel could jeopardize the lives of passengers in stormy crossings.[37]

Moreover, it would be in the interest of the United States to replace *Ellis Island*, because of her high cost of maintenance. During the last five fiscal years the average annual cost of repairs had been $46,000. The previous year, when the vessel was in drydock at Brewers, the "estimated cost of repairs was over $109,000." The Labor Department therefore urged that she be replaced, and asked that $500,000 be added to its proposed budget for Fiscal Year 1940 for "construction or purchase of a Diesel engine steel hull ferryboat."[38]

---

[36] Wagner and Uhl, to Commissioner I & NS, Oct. 8, 1938, I & NS, File 55812-712B.

[37] Saunders to Director of the Budget, Oct. 28, 1938, I & NS, File 55812-712B. Richardson Saunders was Secretary Perkins' administrative assistant.

[38] Ibid.

The Department of Labor, however, was unable to prevail on Congress to include $500,000 for a new ferryboat in its budget for Fiscal Year 1940. With the outbreak of war in Europe and the threat to American security raised by the sweeping Axis successes of 1939-1941, Congress and the nation were more concerned with national defense than replacing *Ellis Island*.

The rack at the Barge Office was located at the confluence of the East and North rivers. The "conflicting currents" and heavy water traffic passing that point constituted hazards for *Ellis Island's* pilots. They accordingly had to be extremely careful. In the past one of the pilots had rammed the ferryboat into the bridge at the Barge Office on several occasions, and as punishment he had been reduced to a deckhand.[39] District Director Uhl was therefore surprised to learn that on October 10, 1939, *Ellis Island* had rammed the ferry rack and bridge at the Barge Office, with some damage to the timbers. Repairs were made by the Department of Labor force from Ellis Island.

Although the damage had been repaired, the New York Port Authority was not prepared to drop the subject. One of the Authority's engineers complained that "a serious condition exists in connection with these recurring accidents, and . . . there is grave danger" when the bridge of the ferry rack is rammed too hard and driven up toward the building that the accident may cause "the spreading of the structural towers of the gallows frame which supports the heavy hoisting machinery and counterweights of the ferry bridge." This could have terrible consequences should the gallows frame come crashing down on the New York end of the ferry, which was open and generally crowded with passengers eager to be first ashore.[40]

---

[39] Uhl to Supervisory Engineer, Dec. 19, 1939, I & NS, File 55, 812-712C.

Uhl, in view of the position taken by the Port Authority, cautioned the pilots against ramming the rack and bridge at the Barge Office terminal. On doing so, he reminded them of the demotion given one of their predecessors.

A thick fog blanketed New York Harbor on the night of February 10-11, 1940. *Ellis Island*, after some delay because of the weather, pulled away from the Barge Office rack at 12:20 a.m., with 72 passengers. The fog had started to lift, and Pilot Jacobsen believed the passage could be effected in safety. Soon after leaving the rack, the boat "hooked up" to get steerageway and to settle on her course. After running "hooked up" for about two minutes, she slowed down, running on one bell. Pilot Jacobsen now heard a fog whistle, stopped his vessel's engines, and continued to blow fog signals. As the other craft seemed to be getting nearer, *Ellis Island* backed water. The other boat, which proved to be the "Liberty Island ferry" now passed, and *Ellis Island* resumed her course west and north, and running on a "slow bell."

---

[40] District Engineer to Supervising Engineer, Oct. 11, 1939, I & NS, 55, 812-712C.

There were two stakeboats, which by Federal permit, anchored near the approach to the Ellis Island slip. The lower (southern) stakeboat was owned by McWilliams Blue Line, Inc., while the upper belonged to Tice Towing Co. Jacobsen, believing that he was approaching the Ellis Island slip, suddenly sighted dead ahead, through the gloom, the white and red light of the McWilliams stakeboat. Fearing a collision, he reversed *Ellis Island*, and backed into the coal barge *Raven*. The barge in turn was driven into several others moored to the stakeboats. After colliding with *Raven*, *Ellis Island* grounded. A quick check indicated no damage, but the passengers and crew were compelled to remain aboard the craft until 6:25 a.m. when she was freed by the Coast Guard cutter *Arundel*. *Ellis Island* then proceeded to her slip under her own power.[41]

Owners of the damaged barges filed claims totaling $9,000 against the United States. They charged that Pilot Jacobsen had been negligent. After making an investigation, the U. S. Attorney General's Office found that *Ellis Island* was at fault, because: (a) Pilot Jacobsen had failed to station a lookout on the stern, after the light of the McWilliams stakeboat had been sighted, and *Ellis Island* had reversed her engine; (b) of Jacobsen's long, nine-hour tour of duty; (c) the vessel's compass was found to be in error; and (d) *Ellis Island* was off course. In view of these findings, the United States reimbursed the owners for one-half of the amounts claimed for damages.[42]

---

[41] Uhl to Commissioner of Immigration, Feb. 19, 1940, and Avery to Attorney General, Jan. 21, 1941, I & NS, File 55812-712D. Myron Avery was special assistant to the U. S. Attorney for the Southern District of New York.

In July 1940 it was determined to replace the vessel's main generator. The one in use had been in the craft since her commissioning in 1904, and it was obsolete as both engine and generator were "connected to a common shaft without a coupling." Within the past several months, the shaft had crystalized and had snapped. This in turn fractured the crankcase of one of the engines.[43]

When the proposals for a new generator were opened, it was found that a bid of $5,323 submitted by the Westinghouse Electric & Manufacturing Co. was low. This price was considered exorbitant and new proposals were solicited. These were opened on August 29, and the low bid of $2,184, made by Turbine Equipment Co., was accepted.[44]

Although the United States went to war on December 8, 1941, the Immigration and Naturalization Service continued to operate the ferry. It was still necessary to put *Ellis Island* in drydock and have her checked by inspectors from the Bureau of Marine and Navigation. Proposals were solicited on April 2, 1942, for "docking, scraping, washing, wire brushing, and painting" the vessel's steel hull. The only bid was $3,950 by Brewer Dry Docks Co. Its acceptance was authorized by the Commissioner-General on April 8.[45]

---

[42] Avery to Attorney General, Jan. 21, 1941, and Shea to Director of Bureau of Immigration, Jan. 23, 1941, I & NS, File 55812-712AD. The barges were owned by: Raven Coal Col, McLain Line, Harold L. Valentine Inc., and Red Star Towing & Transportation Co.

[43] Uhl to Commissioner of I & NS, July 13, 1940, and Wagner to Uhl, July 17, 1940, I & NS, File 55812-712D.

[44] Wagner to Uhl, Sept. 9, 1940, I & NS, File 55812-712D.

Meanwhile, arrangements had been made to hire a substitute boat, *Mayfair*, from the Sutton Line. Plans had been made to send *Ellis Island* to Brewer Dry Docks on May 11. But on the 7th a hitch developed, when the U.S. Maritime Commission authorized the U. S. Navy to take over *Mayfair* at 3 p.m. on the 8th. To make matters more embarrassing, the Sutton Line did not have any other boats available to send as a replacement. The Immigration and Naturalization Service thus found itself embroiled in wartime priorities. *Ellis Island's* visit to the drydock would have to be postponed.[46]

It was September before arrangements could be made for renting a substitute boat from Keansburg Steamboat Co. The price the Service would have to pay, $750 per day, reflected shortages in shipping created by global conflict. In April 1941 a substitute boat had cost $485 per day, while in August 1940 one could be had for $360 per day.[47] The contract for the boat signed, *Ellis Island* was taken to Brewer Dry Docks to have her hull scraped and painted. While at Brewers, two galvanized iron, mushroom type deck ventilators were installed. These were needed to ventilate the end compartments to prevent the hull plates and frames from rusting.[48]

---

[45] Uhl to Commissioner-General April 8, 1942, I & NS, File 55812-712E.

[46] Uhl to Commissioner-General May 11, 1942, I & NS, File 55812-712E.

[47] Harrison to District Director, Sept. 15, 1942, I & NS, File 55812-712E.

The cost of renting a substitute boat continued to inflate. In April 1943, it was $800 per day. With *Ellis Island* due for another trip to drydock, the Immigration and Naturalization Service contacted the War Department's Transportation Command. The Transportation Command was agreeable to permitting the Immigration people to employ one of their boats up to six days for a fee of $210 a day. This sum was to be paid by a transfer of funds.[49]

Brewer Dry Docks was awarded a contract in April and again in September 1943 for "furnishing of minor hull and machinery repairs, docking, scraping, washing, wire brushing, and painting" *Ellis Island's* steel hull. The contract price for this work in September was $8,206.[50]

The wartime blackout of Atlantic Coast harbors added to navigational hazards. On April 27, 1944, *Ellis Island*, with Pilot Raymond Ives at the wheel, on her 12:45 a.m. trip from the Barge Office side-swiped a barge. The barge was lashed onto the dredge *Governor Warfield*, moored in the channel east of the entrance to the Ellis Island slip. A survey of the damage showed Ives that about 75 lineal feet of the bulkhead of his vessel's superstructure had been carried away between the upper and main decks. There appeared to be no damage to the hull or upper deck, while the upper deck did not sag, as to be expected when the outer supports of the bulkhead were smashed.

---

[48] Wagner to District Director, July 25, 1942, I & NS, File 55812-712E.

[49] Oliver to Immigration & Naturalization Service, Sept. 25, 1943, I & NS, File, 55812-712E.

[50] Watkins to Commissioner, Sept. 29, 1943, I & NS, 55812-712E. W. F. Watkins had replaced Uhl as District Director of the New York Office.

A call for assistance brought the Coast Guard. A crew was turned to shoring up the upper deck and clearing away the debris. This work was completed by nightfall. Cost of repairing the damage was $2,750.[51]

Ellis Island was drydocked for repairs and maintenance twice in 1944. On both occasions a substitute boat, *Gen. Arthur W. Yeates*, was rented from the War Department's Transportation Command for $210 per day. Liberty Dry Dock, Inc., was awarded the contract for the June trip to the yard. The corporation was paid $10,483 for "docking, scraping, wire brushing, and painting the hull," and machinery repairs to the craft.[52]

---

[51] H. L. Booth to Holton, April 28, 1944, I & NS, File 55812-712E. Booth was chief of maintenance and Ralph Holton was District Administrative Officer.

[52] Gray to District Director, May 22, 1944, I & NS, File 55812-712E. Col. E. B. Gray was an officer in the Transportation Command.

CHAPTER IV

Edward Corsi Recalls the Ferryboat

One of the millions of immigrants who landed in America from Ellis Island was Edward Corsi, who in November 1931 was named Commissioner of Immigration at the Port of New York by President Herbert Hoover. Corsi had entered the United States in 1907 through Ellis Island. A ten-year-old at that time, Corsi recalled in his book, *In the Shadow of Liberty*,[1] published in 1937, that a little vessel, *General Putnam*, brought his family from the ship that had transported them from Italy to the Immigration Station. As *General Putnam* coasted into the Ellis Island slip, the passengers began to move. "We moved with them and as we stepped from the gangplank to the land, all silent and subdued, I knew that my parents were thinking as I was, 'What is next?'"

During the ride across the bay on *General Putnam*, Corsi had been watching the faces of those milling about, and he now realized that Ellis Island could inspire both hope and fear. Some of the passengers were afraid and obviously "dreading the events of the next few hours; others were impatient, anxious to get through the inspection and be off to their destinations." He never forgot this scene. All were motivated by one desire--to make a fresh start in a free country.[2]

---

[1] Edward Corsi, *In the Shadow of Liberty: The Chronicle of Ellis Island* (New York, 1937), p. 7.

After being processed and passed for admission to the United States, the newcomers walked to the slip, carrying their baggage, and boarded *Ellis Island*. Each prospective new American had his own thoughts as *Ellis Island* got under way. Corsi recalled that as he crossed the harbor, he was first struck by the fact that "American men did not wear beards. In contrast to my fellow-countrymen I thought they looked almost like women. I felt that we were superior to them. Also on the boat I saw my first Negro." These sights, however, paled to nothing when *Ellis Island* docked at the Battery and the first elevated train rumbled by. "There could be nothing in America superior to these!"[3]

When Corsi returned as Commissioner of Immigration, he interviewed Frank Martocci, who would have probably processed his family in 1907. In recalling the old days of unrestricted immigration, Martocci told Corsi:

> We went to work . . . from the Barge Office at the Battery. From there the ferryboat [Ellis Island] took most of the employees to Ellis Island at 9 in the morning. Hundreds of other people were always waiting and clamoring to get on the same boat. These were the friends and relatives of the immigrants expected during the day, or already detained at the Island.

---

[2] Ibid., p. 5.

[3] Ibid., p. 22.

> To get on the boat, these friends and relatives, a mixed crowd of all nationalities, had to obtain passes from the steamship office, and the guards used to circulate among them at the Barge Office to make sure that only the proper people had these passes.
>
> Once on the Island, we employees had to plunge immediately into our work for in those terrifically busy days whole boat loads of immigrants were waiting to be inspected every morning.[4]

In Fiscal Year 1910 Commissioner Williams had instituted a procedure designed to make it easier for detained immigrants to communicate with friends or relatives in the United States. A postal card was introduced by the Immigration Service. This card, which the authorities caused to be filled in and mailed free of charge, read:

> _____ ______ has arrived at Ellis Island by steamship ________. This immigrant refers to you. If you desire to call on his or her behalf you may do so. Ferryboat [Ellis Island] leaves barge office (Battery Park) every hour on the hour. You are not required to pay anything to anyone in connection with this matter. If you come to Ellis Island, bring this card with you.[5]

It was only when the immigrant disembarked at the Barge Office slip from *Ellis Island* that he was in America. After he passed through the Barge Office, he was subject to "serious dangers of exploitation."

---

[4] Ibid.,pp. 72-73.

[5] *Annual Report of the Commissioner-General of Immigration to the Secretary of Commerce and Labor for the Fiscal Year Ended June 30, 1910* (Washington, 1910), p. 136.

The police did all they could to protect the newcomers, but still some got into the clutches of confidence people.[6]

One of the amusing sights of New York during the decade between 1904-1914 was the scene at the Battery when *Ellis Island* docked with her cargo of "human freight." Corsi had been told by many people

> that half an hour after the boat had docked, the dressing rooms in the adjoining ferry houses, the lower end of Battery Park, and even the gutters along the sidewalks presented the appearance of a junk shop. Queer headgear of women lay about, the familiar black visored caps of men and boys, waists and shirts or trousers that undoubtedly went well in the outlying districts of Moscow but would not go far in Manhattan without causing comment and ridicule.
>
> American friends and relatives hurriedly dressed the newcomers to disguise the fact that they had come in steerage. Modern American clothing and baggage were handed to the arrivals as soon as they stepped off [Ellis Island], and they were forced to put it on in the nearest convenient place, before meeting anyone in America. Typical immigrant valises and bags were discarded in the street, thrown overboard from Ellis Island, or abandoned in the public dressing rooms. Such are the ways of vanity.[7]

---

[6] Corsi, *In the Shadow of Liberty*, p. 156.

[7] Ibid., p. 267.

CHAPTER V

Efforts to Secure a Second Vessel

By the autumn of 1906, it was apparent to the officials of the Immigration Service that another ferryboat was required to provide relief for *Ellis Island*. Since June 1904 *Ellis Island* had been in continuous service, except on five occasions for a total of 15 days, when she had been ordered into drydock for "outside painting and machine repairs." There had been expended on the craft on these visits to drydock for machinery repairs and painting $8,215.36, the major portion being charged against the account for repairs. A considerable part of this sum, according to Chief Engineer Fry, might have been saved if it had been possible "to lay the boat up immediately upon the discovery of a broken propeller or other derangement of mechanism abroad." This was impossible, however, as *Ellis Island* had no replacement. She had been run, and was at present running with her main shaft badly out of balance, because of a broken wheel. This caused a pronounced vibration of her hull, and, if not corrected, it would be fatal to the life of her engines.

The Scotch Boilers were also subject to deterioration, as they needed to be cleaned out at periodic intervals. It was the practice to have this done every six months, when the vessel was taken in drydock to have her hull painted. For those interested in economy, it was pointed out that coal consumption was increased by boiler scale.

In the opinion of Frank Howell, Civil Engineer, if the ferry were "to live anything like the usual length of time allotted to boats of her" class, some arrangements "must be made for a substitute boat to be made immediately available in case of necessity." Howell's recommendation was for the government "to build or purchase another vessel."[1]

Commissioner-General of Immigration Sargent was impressed with the arguments advanced by Howell and Chief Engineer Fry, and on November 12, 1906, he asked Secretary of Commerce and Labor Victor H. Metcalf to budget $115,000 for the construction or purchase of another double-ender ferryboat, as *Ellis Island* did not "fully meet the requirements of the Service." To support his contention, he pointed out that the continuity of the service was endangered by "the periodical need of withdrawing the vessel from duty for repairs," because there was no provision for emergency ferry service. On the few occasions when *Ellis Island* was disabled by accidents to her machinery, considerable difficulty had been encountered by Commissioner Watchorn in chartering a vessel of the "character required to meet the conditions that prevail."[2]

---

[1] Howell to Watchorn, Oct. 31, 1906, NA, RG85, File 51, 450.

[2] Sargent to Secretary of Commerce & Labor, Nov. 12, 1906, NA, RG85, File 51, 450.

After studying this memorandum, Commissioner Watchorn checked with Chief Engineer Fry. Fry questioned the amount to be budgeted for a new vessel, because he felt certain that not less than $125,000 would be required for her construction. To support his view, he observed that the shipbuilding industry was caught in an inflationary spiral, and the cost of labor and materials had skyrocketed in the three years since the construction of *Ellis Island.*[3]

Congress, in an economy mood, was unwilling to vote necessary funds, and the Immigration Service was compelled to get along with one boat to transport the flood-tide of immigrants from Ellis Island to the Battery. In March 1910 the Commissioner-General of Immigration again asked Congress for $125,000 for the construction of a second ferryboat.

To justify this expenditure, it was pointed out that about "2,500,000 passengers are annually" transported by *Ellis Island*. She was now six years old, and since commissioning "she had been in constant service except during the short intervals when hauled out for repairs." Moreover, it was observed that the ferry passage to Ellis Island from the Battery was "considered the most dangerous in New York Harbor, as the routes of all the Sound streamers were crossed," and there were rocky shoals to the north of the entrance to the Ellis Island slip. In foggy weather there was always danger of collision. The difficulty of securing a substitute boat, when *Ellis Island* had to be drydocked, had increased. Recently, it had taken five weeks to charter a vessel to use while the ferryboat was repaired. "Common prudence" dictated that the government should have a second craft not "only to relieve the present one of the excessive service she is rendering every day, but to take her place both in the event of a breakdown and when she must be laid up."[4]

---

[3] Watchorn to Sargent, Dec. 7, 1906, NA, RG85, File 51450; *Annual Report of the Commissioner-General of Immigration for the Fiscal Year Ended June 30, 1907* (Washington, 1907), 77.

The House Appropriations Committee once again rejected the request for funds for a second ferryboat. On being advised of this action, the United States Commissioner of Immigration at the Port of New York, William Williams, on February 28, 1911, wired Secretary of Commerce and Labor Charles Nagel, "House assumes grave responsibility on cutting out appropriation for 2d ferryboat. Please urge Senate Committee to restore this item."[5] The Secretary, however, failed in his efforts to get the Senate Appropriations Committee to include funds for a second ferryboat in the appropriations to operate the Immigration Service for Fiscal Year 1912.

---

4. Commissioner-General of Immigration to Secretary of Commerce & Labor, March 1910, NA, RG85, File 51, 450.

5. Williams to Nagel, Feb. 28, 1911, NA, RG85, File 51, 450.

Commissioner Williams was undaunted by this rebuff. In July 1911 he again asked that a request for $125,000 be included in the budget for Fiscal Year 1913 for a second ferryboat.[6] Additional support was provided for Williams' request on November 10, when *Ellis Island* collided with a sunken object and snapped one of her propellers. As it was unsafe to operate the craft in this condition, because she was unable to backwater, she had to be sent to drydock.

Contacting the Commissioner-General, Williams complained that *Ellis Island* had been compelled to make several trips between the time of the accident and when a replacement could be chartered. To make matters worse, a pea-soup-like fog enveloped the harbor on the morning of the 10th, and between 10 and 11 a.m., *Ellis Island*, in her disabled state, made a run to the island "with a large number of officials on board." Williams argued that it was "wrong to expose Government officials to such dangers when they can be eliminated through a second boat."[7]

Within two weeks after the propeller had been replaced, *Ellis Island* encountered additional trouble on November 23, when the guide-rod of the reversing ram broke.[8] Engineer Munster voiced the opinion that this breakdown had been caused by continuous service, or a flaw in the rod which could not be detected by outside examination. A new rod was secured and installed, and service was resumed, after an interruption of six hours. While *Ellis Island* was laid-up, the Immigration Service hired a Moore Co. boat.[9]

---

[6] Williams to Commissioner-General of Immigration, July 1911, NA, RG85, File 51, 450.

[7] Williams to Commissioner-General, Nov. 11, 1911, NA, RG85, File 51, 450.

[8] This mishap occurred while the craft was operating the reversing mechanism of her main engines.

Commissioner Williams, in calling attention to Mr. Munster's statement blaming "continuous service" for the latest breakdown, complained that *Ellis Island* was so overworked that "we may congratulate ourselves that more such breakages do not occur."[10]

Despite Williams' hard-hitting efforts, Congress refused to include $125,000 for another ferryboat in its appropriations to fund the Immigration Service for Fiscal Year 1913. In 1913 the Commissioner, with a Democratic administration in Washington, presented another request to Congress for a second ferryboat. He pegged his arguments on three points: (a) *Ellis Island* was overworked, as she was run under "forced" conditions. She had no "lay-up" day on which her boilers could be flushed, and necessary adjustments made to "take up ware on the engines." Since she had been commissioned nine years before, all repairs and replacements to her engines had been made "once a year at the time of annual overhaul, unless an accident or emergency" necessitated immediate action. If she were tied-up at periodic intervals for minor repairs and adjustments, the cost and scope of those made during the annual trip to drydock would be considerably less. Failure to flush the Scotch Boilers, at monthly intervals, would make it necessary to replace them before many years passed. Already it had been necessary to patch one of the fire-boxes, and the local steamboat inspector had ordered it to be replaced on the ferry's next trip to drydock.

---

[9] Williams to Commissioner-General, Nov. 25, 1911, NA, RG85, File 51450.

[10] Ibid.

An investigation had disclosed that every ferry route in New York Harbor, except the one to Ellis Island, had an extra, or back-up, boat. The Governor's Island route, also operated by the Federal Government, had two ferryboats.[11] (b) Experience had demonstrated that *Ellis Island* had to be hauled out of water twice a year to have her hull painted. During one of these trips to drydock, she was usually laid-up for about 30 days for repairs to her machinery. It was becoming increasingly difficult to charter boats to replace *Ellis Island* during these periods. In addition, the vessels chartered were generally poor substitutes.[12] (c) Finally, the ferry crossing was dangerous, especially in the winter, when there was ice and fog, and "common prudence" required that there should be a substitute boat, readily available, should an emergency develop.[13]

---

[11] Memorandum, Commissioner to Secretary, 1913, NA, RG85, File 51450.

[12] Ibid.

[13] Ibid.

If Congress were unwilling to appropriate $125,000 for a new ferryboat, it was thought that perhaps the legislators would be agreeable to voting $40,000 for the acquisition of *Annex*. This craft, a wooden-hulled vessel, was owned by the Pennsylvania Railroad, and had been leased on several occasions to the Immigration Service, while *Ellis Island* was tied-up for repairs.

Congress refused to take action on this request, and Byron H. Uhl, who as Acting Commissioner had replaced Williams as officer in charge of the New York Immigration Station, on August 9, 1913, withdrew the request to have funds for a new ferryboat included in any future budgets submitted to the legislators. Writing the Commissioner-General, he admitted that "the necessity is as great today as at any time previous, and I believe greater, as immigration has been, and is, heavier than at any time since 1907." At the same time, *Ellis Island* was "older and less able to withstand the hard useage to which it is subjected." It was apparent that Congress, although "fully advised," would not act to correct the situation. Consequently, "the responsibilities for conditions which will undoubtedly arise by reason of this deficiency in our equipment must rest with Congress."[14]

In 1921 the Immigration Service, in an effort to reduce expenses, sought to lease *Ellis Island* to anyone willing to operate the vessel over her established route. The only bid received would have "cost more for acceptance than the actual operation" of the boat for Fiscal Year 1920.[15]

---

[14] Uhl to Commissioner-General, Aug. 9, 1913, NA, RG85, File 51450.

Again in 1925, an investigation was made by the Service in an attempt to reduce operating costs. On March 3 Secretary of Labor James J. Davis forwarded to Commissioner-General Husband a memorandum questioning the advisability of requesting of Congress $118,350 to operate *Ellis Island* in Fiscal Year 1926. He asked the Commissioner-General for "complete details of the operation of this ferry, including the number of passengers carried by classification as to employees, immigrants, visitors, etc.; the amount and character of freight; and the share of the cost, if any, born by steamship companies." Secretary Davis would also like to know if this service could be provided through private contract, and whether visitors to Ellis Island could be charged for their transportation.[16]

Commissioner Curran, after checking his statistics, reported on March 14 that the average number of passengers carried daily by *Ellis Island* for the eight months ended February 28, 1925, was 3,100. Of this figure 1,000 of the trips were made by employees of the Immigration Service, 554 by employees of the Public Health Service, 240 by employees

---

15. Curran to Secretary of Labor, March 14, 1925, NA, RG85, File 54969/25.

16. Davis to Commissioner-General, March 3, 1925, NA, RG85, 54969/25B.

of privilege holders, and 100 by mechanics and laborers in the employ of various contractors. The difference between this figure, 1,894, and 3,100 constituted immigrants going to New York and persons visiting Ellis Island on official business.

During the same period, 4,000 tons of freight had been transported, consisting of 610 tons of baggage, 775 tons of commissary stores and equipment for the hospital, 960 tons for the commissary contractor, 1,500 tons of construction supplies, and 155 tons of cleansing gear, bedding, linen, building materials, and stationery for the Immigration Service.

No share of the cost of operation had been borne by the steamship companies. If these companies were to be charged for the

> comparatively small number of aliens carried who arrived on the various lines (and the probability that the fare could not be in excess of five cents), the counting of such passengers, the rendering of bills, clerical help and messenger service involved . . . would be in excess of the benefits derived.

Should visitors traveling to and from the island be charged for transportation, legal complications might be encountered in securing a charter to operate a ferry. As most of the visitors traveled to the island to "complete the inspection of aliens who had been detained, it was to the Service's interest to expedite the completion of their mission." To charge a fare would deter some of them from visiting the island.

Commissioner Curran was of the opinion that *Ellis Island* was being operated as economically, for the service rendered, as any of the New York Harbor ferryboats. His only suggestion as to a possibility of reducing the cost to the Immigration and Naturalization Service was to call on the Public Health Service "to pay its proportion" of the cost of operation. The Ellis Island Hospital, as the Secretary knew, was referred to as Marine Hospital, and as such the Public Health Service should be called on "to bear approximately one-quarter of the operation of the boat."[17]

Commissioner-General Husband on March 28 referred Curran's suggestion to Dr. Hugh S.Cummings, Surgeon-General, Public Health Service. On April 2 Surgeon-General Cummings notified Secretary Davis that "at present, the Appropriations for the Public Health Service are insufficient to allow it to participate in the proposed arrangement." He would be willing, however, to add an appropriate amount, $30,000, to the estimates for his Bureau for the next fiscal year and submit them to the Director of the Budget and the Congress.[18]

Secretary Davis determined not to press the subject, and the Immigration and Naturalization Service would be compelled to continue to fund the expense of operating and maintaining *Ellis Island*.

---

[17] Curran to Commissioner-General, March 14, 1925, NA, RG85, 54969/25B.

[18] Cummings to Davis, April 2, 1925, NA, RG85, 54969/25B.

In 1938 there was renewed interest in securing a new ferryboat. In that year the House Subcommittee on Appropriations, on reviewing the budget request made by the Department of Labor, observed that the "matter of repairs to the ferryboat *Ellis Island*" had given it considerable concern. Over $500,000 had been spent for repairs on a craft that had cost, when new, about $100,000. The chairman of the subcommittee suggested that a study be undertaken by the Immigration and Naturalization Service to determine "the advisability of replacing" *Ellis Island* with a new vessel less costly to maintain.

The study disclosed that it would be in the interest of the government to replace *Ellis Island*, because of the high annual maintenance costs. During the last five years, it had been found, the average annual cost of repairs to the vessel had been $46,000. In 1937, when the ferryboat was last in drydock, the cost of repairs had zoomed to over $109,000.

It was the recommendation of the Department of Labor that *Ellis Island* be replaced. To underwrite this project, a "supplemental estimate of the amount of $500,000 for the construction or purchase of a Diesel engine steel hull ferryboat" was requested.[19] Before this recommendation could be acted upon, World War II had commenced. The Bureau of the Budget and Congress were deluged with requests to fund programs of a more immediate and vital nature.

---

[19] Saunders to Director of the Budget, Oct. 28, 1938, Records, I & NS, File 55812-712B. Richardson Saunders was an assistant to Secretary of Labor Perkins.

CHAPTER VI

Ellis Island Makes Her Last Run

The Immigration and Naturalization Service on June 14, 1940, had been transferred from the Department of Labor to the Department of Justice. During the war years, as immigration through the Port of New York declined and all but ceased, Ellis Island became principally a detention center for family groups of enemy aliens. In 1943 all functions of the Immigration Service in the New York area, except detention, were concentrated in the building at 70 Columbus Avenue, while Ellis Island was kept "as a detention station for aliens." Soon after the end of World War II, the Attorney General sought to get rid of the expensive facilities at Ellis Island, but failed. In 1953 a study of the problem of space indicated that all operations still carried on at Ellis Island might be housed in the building at 70 Columbus Avenue. The major benefits foreseen were two. "Having all of the functions presently located at 70 Columbus Avenue integrated with the functions not at Ellis Island will add tremendously to the efficient operation of the New York District." Also, "of major benefit will be the tremendous money savings that will be effected by not having to maintain Ellis Island and the ferry." The major problem involved would be finding quarters for aliens currently detained on Ellis Island.[1]

---

[1] Pitkin, "Ellis Island as an Immigrant Depot," pp. 217-225.

While the Service sought to find new quarters for the detainees, *Ellis Island* continued to operate. The editors of the *New York Times* in April 1954, learning that *Ellis Island* would soon have been in service half a century, sent one of their reporters, Werner Bamberger, to do an article on the vessel. Bamberger, impressed with what he saw, informed his readers on April 18:

> If it weren't for the champagne bottle wrapper on display in her upper deck cabin, listing the date and place of her birth, no one would believe that the ferryboat *Ellis Island* will celebrate her fiftieth anniversary of service next month.

The "old lady of the harbor" still looked trim and fit and her engines pounded out a respectable ten knots. Bamberger watched as

> she gracefully swung into her berth at Whitehall Street Ferry terminal . . ., a slight breeze whipped her Stars and Stripes and the flag of the United States Immigration Service on top deck staffs. Her yellow and black ventilators, her immaculately white wooden superstructure, trimmed with blue, lent an air of cheerfullness to the drab and musty ferry slip.

Posted in "the old-fashioned wheelhouse" was Capt. Raymond P. Ives, one of the five master pilots assigned the craft. Ives spoke "with affection of the 'old gal' he had helped steer for fifteen years over the one-and-a-half-mile course through the tide-swept, and heavily traveled waters."

He told the reporter that *Ellis Island* was "in very good shape considering her age and gives us very little trouble." The engineers kept the half-century-old compound steam engines "in top shape and the hull, though patched like an old quilt . . . is as sound as the day she was built."

In her career *Ellis Island* had logged an estimated 900,000 miles, although she never "strayed from her short but scenic run." Before World War I, in the days of unrestricted immigration, as many as 5,000 prospective American citizens rode her daily from Ellis Island to the Battery to begin a new life in the United States. By April 1954, only 1,700 to 2,000 people, mostly government employees, used her each day. Outside of Federal employees, most of her passengers now consisted of persons sent to the island for clarification of their immigrant status or those awaiting deportation proceedings. As of the second week of April 1954, there were 315 persons on the island belonging to these categories.

In 1954 Captain Ives estimated that a vessel similar to *Ellis Island* would cost $700,000.[2]

In November 1954 a new detention policy went into effect, under which "only those aliens likely to abscond and those whose release would be inimical to the national security" were to be detained. "Many aliens whose papers were not in order," it was reported, "were previously detained at Ellis Island and other facilities. Under the present policy most aliens with purely technical difficulties are allowed to proceed to their destinations under parole."

---

2. *New York Times*, April 18, 1954.

This humanitarian ruling soon brought the history of Ellis Island as an Immigration Station to a close. The Island was vacated and declared excess on November 3, 1954.[3] The ferryboat *Ellis Island*, having logged over 1,000,000 miles, made her last run on November 29, 1954, to the deserted facilities at Ellis Island. In contrast to May 5, 1904, when she arrived in New York Harbor under fair skies and light variable winds, a strong westerly wind kicked up white caps on the Upper Bay. Captain Ives was at the wheel, as she headed out of No. 7 slip at Whitehall Street on her final run.

Seventeen minutes later--two minutes off the regular time for the run, because of strong head winds--Captain Ives maneuvered his vessel into the slip at the eastern end of Ellis Island. Two deckhands leaped ashore to make her fast. One of the few passengers aboard for the final run was Edward J. Shaughnessy, area District Director of Immigration and Naturalization. Shaughnessy told a reporter for the *New York Times* that the "boat had carried 15,000,000 passengers, of whom 12,000,000 were immigrants."

A Coast Guard patrol boat returned the crew and passengers of *Ellis Island* to Whitehall Street. Six guards detailed to make round-the-clock security patrols of Ellis Island were charged with keeping an eye on the old ferryboat.[4]

---

[3] Pitkin, "Ellis Island as an Immigration Depot," 225-226.

[4] *New York Times*, Nov. 30, 1954.

During the period, 1954-1965, while General Services Administration was responsible for Ellis Island, maintenance on the craft was minimal. Once a year a crew would board *Ellis Island* and pump the bilges "removing about a 5-foot depth of water." This water apparently seeped through started seams and faulty piping. After the National Park Service assumed responsibility for Ellis Island and the ferryboat in May 1965, even less attention was paid to maintenance of *Ellis Island*. She was pumped once, in the autumn of 1967. By August 1968 considerable water had again accumulated in the bilges, and plans were made by the New York City Group of the National Park Service to pump her again. Before this could be done, *Ellis Island*,on the weekend of August 10-11, 1968, sank at her berth.

News that the historic boat had sunk was telephoned to the Northeast Regional Office by Superintendent Henry Schmidt of the New York City Group on the 12th. In response to this information, the Regional Office sent Regional Chief of Maintenance Nathan B. Golub to New York on August 22 to make an inspection and submit a report.[5]

Golub was accompanied to the site by members of the Park Staff. He found

> at high tide the lower corner of the upper deck would be awash. This subjects the wooden super-

---

[5] Memorandum, Golub to Regional Director, Aug. 26, 1968, a copy of Golub's memorandum is found in the files of OAHP.

> structure to the destructive force of wave action. Although the wood superstructure is already very punky and completely useless in its present condition . . ., it is still available for the measurements that will be essential if the ferry is to be rehabilitated. However, in its present state, the superstructure will probably be destroyed and swept away within a year.

Golub felt that if the woodwork were to be preserved, the vessel must be refloated. But before this could be done, the Service must learn the extent of damage "so that we can estimate the cost of repairs necessary to refloat" the craft. To rehabilitate *Ellis Island*, Golub believed three steps were necessary: (a) investigate the reason for the sinking and extent of damage; (b) refloat the vessel and make emergency repairs; and (c) rehabilitate the entire craft in conformity with the use proposed in the Master Plan.[6]

A contract was signed by the New York City Group with International Underwater Contractors, Inc., to have "a qualified diver" investigate the hull and see if he could ascertain the cause of the sinking.[7] On September 12 a team of IUC divers visited *Ellis Island*, and found the hull rested three-fourths in the mud and the vessel listed 15-20 degrees. The crew chief, after examining the superstructure, decided it would be unsafe to have one of his people make an interior investigation. The men sent down to inspect the hull's exterior found a hole 5" x 1", seven feet below the maindeck flange, on the starboard forequarter.

---

[6] Ibid.

[7] Memorandum, Palmer to Supt. NYCG, Sept. 3, 1968, files OAHP.

Plates about the hole were "badly deteriorated." This hole, it was reported, "could be one of the causes or the sole cause of" her sinking.

IUC agreed with Golub that the wooden superstructure was in "very bad condition because of age and water damage." Most of the water damage was "caused by the continuous wave action from passing boats, bad weather, etc." If the superstructure were carefully removed, it could be preserved and divers permitted to make "a safe and thorough inspection of the craft's interior."[8]

Superintendent Schmidt, when he forwarded the report of the examination made by IUC to Regional Director, Northeast, reported that it was doubtful "the decks and superstructure will remain attached to the hull over a period of winter storms and continuous tide action." Moreover, he felt that New York City and State authorities, charged with responsibility for harbor safety, would complain about debris from the superstructure littering the harbor.

Schmidt recommended that historical architects be called upon "to secure detailed sketches, measurements, and photographs of the superstructure." Next, a decision on the removal of the superstructure was needed. This would involve the obligation of funds.[9]

---

8. Cooper to McClanahan, Sept. 18, 1968, files OAHP. Ray Cooper signed the letter enclosing the report made by IUC divers, while L. F. McClanahan is Asst. Supt. NYCG.

9. Schmidt to Regional Director, Northeast, Sept. 27, 1968, files OAHP.

Regional Chief of Maintenance Golub, on reviewing IUC's report and Schmidt's covering memorandum, agreed that the next step should be "to acquire architectural data on the superstructure as quickly as possible." Preserving the steel hull, since it was not as fragile, was not as urgent. An ideal solution would be to program sufficient funds "to properly achieve the entire job," but a temporary and acceptable alternative would be to remove "the superstructure for subsequent study pending available funds." Current fiscal limitations obviated the project's inclusion in the Region's 1970 Fiscal Year program. The superstructure, however, could not wait until 1970 FY. He therefore recommended that the Chief, Office of Archeology and Historic Preservation, "be immediately apprised of this project and its urgency."[10]

On October 10 Regional Director Lemuel A. Garrison forwarded to The Director a request for assistance from the Office of Archeology and Historic Preservation. On doing so, he stressed the "urgency of initiating action if we expect to salvage the 'Ellis Island' and collect reliable data as a basis for restoration."[11]

The situation became more critical at the end of October, when "a large portion of the exterior siding of the main deck" was lost to the elements.[12] Regional Director Garrison on November 8 forwarded this information to The Director, along with a request for "advice on how we may still save or retain portions of this historic vessel."[13]

---

[10] Golub to Regional Director, NE, Oct. 2, 1968, files OAHP.

[11] Garrison to Director, Oct. 10, 1968, files OAHP.

[12] McClanahan to Regional Director, Northeast, Oct. 31, 1968, files OAHP.

Associate Director Edward Hummel accordingly asked the Office of Archeology and Historic Preservation for an evaluation of the historic significance of *Ellis Island*. This had to be considered and determined in the context of the boat's significance to the story of immigration and Ellis Island. Congress had determined that the Service should administer and develop the Island and its historic and recreation resources for the benefit of the American people. It was determined that the preservation of *Ellis Island* was as "important to presenting and interpreting the story of immigration in the United States as any building or other structure on the Island itself."[14]

It was pointed out by Dr. Ernest Allen Connally, Chief, Office of Archeology and Historic Preservation, that the first and immediate responsibility of the Service was to salvage the boat so she could be "studied and data obtained that will permit its faithful restoration or reconstruction, as future studies may determine to be feasible and desirable." To accomplish this, "the Service should provide emergency funds within the limits of its capability to accomplish that purpose." This decision would be left up to management.

---

13. Garrison to Director, Nov. 8, 1969, files OAHP.

14. Connally to Director, Nov. 29, 1968, files OAHP. Dr. Ernest Allen Connally is Chief, Office of Archeology & Historic Preservation

To provide technical data to assist in this objective, and pending a decision by management, Dr. Connally took two steps: first, he sent Joseph Watterson, Chief, Division of Historic Architecture, and Henry Judd, Chief, Branch of Preservation, to New York on December 2 to meet with Nat Golub and Superintendent Schmidt to study the boat's condition[15]; and second, Historian Edwin C. Bearss was assigned to prepare a research report on *Ellis Island* for "the purpose of assembling all the known documentary data relating to its construction history and its use by the United States Immigration Service."

An on-site inspection of the vessel was made by Watterson, Judd, and Golub, along with Assistant Superintendent McClanahan, Historian Fenton, and Engineer Wolfe of the New York City Group. They found that *Ellis Island* was being quickly "divested of its wood superstructure by the water action in the harbor." Since Golub's August 22 visit "almost the entire lower deck" had been cleared of "wood members and now shows only the structural steelwork."

The group estimated that at least 90 percent of the superstructure was "beyond salvage as interpretable, usable material." They were in agreement that any expenditure for temporary emergency repairs "would be wasted inasmuch as the remaining fabric could, and probably would, be wasted inasmuch as the remaining fabric could, and probably would, fail very shortly." It was felt by the group that the $400,000 estimated cost for rehabilitating the boat "might exceed the cost of reconstruction that would serve the same purpose as an exhibit in place." While it was recognized that *Ellis Island* should be included as a part of the Ellis Island story, it was agreed that she would be assigned "the lowest priority in the very costly construction program." If funds should become available for the boat's reconstruction, the project could be programmed. Meanwhile, basic data for this work would be assembled from which plans and specifications could be drawn.

---

[15] Ibid.

It was recommended that: (a) plans to rehabilitate *Ellis Island* be abandoned. The Park would construct a floating boom to confine the debris. (b) The Office of Archeology and Historic Preservation would initiate a field study of the vessel to include photographs, sketches, and measured drawings. (c) When all data had been collected, a contract should be let to remove *Ellis Island*. Prior to demolition, anything that could be used as an interpretive device would be salvaged.[16]

---

[16] Golub to Regional Director, Dec. 3, 1968, files OAHP.

CHAPTER VII

Statement of Significance

The ferryboat *Ellis Island* for 50 years, except when drydocked, transported immigrants from Ellis Island to the United States and put them "ashore on our land--their future home and country." There were at least 12,000,000 of them during the years 1904-1954. *Ellis Island* was the means by which these future citizens first reached the American mainland. From her decks they stepped ashore into the land of their choosing. Consequently, the craft would have been important in interpreting the story of Ellis Island and Immigration. It was only when the immigrant landed at the Barge Office slip that he was in the land of his dreams, America.

The loss of the vessel has deprived the Service of a valuable historical object. If funds should be programmed at some future date, it would be possible to reconstruct *Ellis Island* , because such a reconstruction would conform to guidelines governing reconstructions laid down in *Administrative Policies for Historical Areas of the National Park Service*. These guidelines are: (a) all traces of the structure (object) have disappeared and its recreation is essential for public understanding and appreciation of the historical associations for which the area was established; (b) there is sufficient historical and architectural data to permit an accurate restoration; and (c) the structure (object) can be rebuilt in a significantly appropriate area setting.

APPENDIX A

Specification for a Screw Two-Deck Steel Hull Ferry Boat, For U. S. Immigration Commission Ellis Island, To Be Built by the Harlan & Hollingsworth Company, Wilmington, Delaware, etc.

APPENDIX A

SPECIFICATION

For a

SCREW TWO-DECK STEEL HULL

FERRY BOAT,

For

U.S. IMMIGRATION COMMISSION

ELLIS ISLAND

To Be Built By

THE HARLAN & HOLLINGSWORTH COMPANY
Wilmington, Delaware

[Property of Bethlehem Steel Corp.
Bethlemen, Pa.]

Press of
Mercantile Printing Company,
Wilmington, Del.

GENERAL INDEX.

A

Ash hoist......43
Ash valve......43

B

Belt frames......6
Bilge keelsons......7
Bulkheads......10
Boiler saddles......12
Boats and davits......19
Bed plates......32
Boilers......41
Boiler and pipe covering......43
Bells......39

C

Coal bunkers......12
Center house......13-23
Cementing......16
Coamings......17
Compasses......19
Canvas......25
Crew's quarters......26
Cylinders......29
Cylinder covers......30
Cross-heads......31
Crosshead guides......31
Connecting rods......31

Hull # 347

SPECIFICATION

—FOR A—

Screw Two-Deck Steel Hull Ferry Boat,

—FOR—

U. S. Immigration Commission,
ELLIS ISLAND.

TO BE BUILT BY

THE HARLAN & HOLLINGSWORTH COMPANY
WILMINGTON, DELAWARE.

PRESS OF
MERCANTILE PRINTING COMPANY,
WILMINGTON, DEL.

SPECIFICATION

—FOR A—

Screw Two-Deck Steel Hull Ferry Boat.

DIMENSIONS.

Length over all	160 ft.
Length over stem posts	154 ft.
Beam of hull at deck	37 ft.
Beam over guards	45 ft.
Depth at center to top of beams . .	15 ft. 3 in.
Crown of deck beams . . . 6 in.	45 ft.

Speed—Vessel to be capable of steaming not less than 12 statute miles per hour in service.

General Description—All plates and shapes of hull and center house to be steel.

Columns 32
Crank shaft 32
Condensers 35
Center keelson 3

D

Dimeusions 2
Double bottom 4
Deck beams 7
Deck tie plates 9
Deck plating 9
Deck fittings 19
Doors 24
Direction indicators 40
Deck pumps 43
Davits 19
Discharge valves 38

E

Engine foundations 12
Ejector 43
Electric lighting 44
Engine-room bells 39

F

Frames 5-6
Floors 5
Fender 18
Fantails 19
Flag poles 20
Fire pipes 20
Floors 25
Feed water heater 36
Flanges 37
Floor plates 35

Filter tank 39
Fittings 37

G

General description 2
Guards 9
Gag pins 14
General clause 27
Gauges, etc 39
Gratings 38

H

Hand steeriug gear 5
Heating 21
Hardware 25

I

Injectors 42

J

Joinery 21-27

K

Keel and center keelson 3

L

Lights 20
Ladders and gratings 38
Lifting gear 39
Lubrication 36

M

Main stringer 8
Main deck cabin 21
Machiuery 29
Metallic packing 34
Mountings 42

N

Netting 25

O

Outfit ... 44

P

Plank sheer ... 17
Painting ... 26
Pistons ... 30
Piston rods ... 30
Propellers ... 36
Piping ... 37
Pumps ... 40
Pedestal foundations ... 12
Pilot houses ... 24
Packing, metallic ... 34

Q

Quadrants ... 14

R

Reverse frames ... 5
Rudders ... 6
Ridge bars ... 10
Riveting ... 11
Rudder carrier ... 13
Rail ... 18
Rail and netting ... 25
Reversing gear ... 33

S

Speed ... 2
Stern frames ... 6
Sisterkeelsons ... 7
Stringers ... 7
Shell plating ... 8
Stanchions ... 10
Steel inspection clauses ... 11
Steam steering gear ... 14

Safety gates ... 15
Side lights ... 16
Scuppers ... 16
Ship carpentry ... 17
Speaking tubes ... 30
Seats ... 24
Stairway ... 24
Skylight ... 26
Steam chest covers ... 30
Shafting ... 34
Shaft bearings ... 35
Stern tubes ... 35
Sea suction and discharge valves ... 38
Smoke boxes ... 42
Stacks ... 42

T

Thrust and Pedestal foundations ... 12
Toilet rooms ... 22
Throttle valve ... 34
Thrust bearings ... 35
Turning gear ... 35
Tees and fittings ... 37
Travelers and lifting gear ... 39
Tools and outfit ... 44
Tank-filter ... 39

U

Upper cabin ... 23

V

Valves ... 30
Valve gear ... 32

W

Water service ... 36
Wrenches ... 39
Whistle ... 40

To have one cabin on main deck, and one cabin on upper deck entered by stairway from main deck. Arranged so that passengers may get on and off at main deck.

Engines to be two cylinder surface condensing cempound, working a screw at each end of vessel.

Boilers to be of Scotch type, 135 lbs. working pressure, with one smoke stack.

To be steered by steam and hand gear at each end of vessel.

Keel and Center Keelson—To be a continuous vertical plate, 42 in. deep and 17½ lbs. per sq. ft. thick, in as long lengths as possible, fitted between collision bulkheads. To have double butt straps, 12½ lbs. per sq. ft., treble riveted. This plate to extend 6 in. below base. To have two side bars, 6 in. deep and 30 lbs. per sq. ft. wt., one on each side, secured by countersunk rivets driven flush.

A solid bar keel, 6 in. by 2 in., to be fitted

between ends of plate keel and stern frames, to be scarphed for side bars and end posts.

Keelson to be connected to double bottom plates by two 4 in. x 3 x 8½ lb. angles in as long lengths as possible, the butts to have angle straps to have limber hole cut through keelson in every frame space.

Double Bottom—To have double bottom 36 inches deep at centre extending between collision bulkheads, this to be used for feed water instead of separate tanks, to hold about ~~15,000~~ 13600 gallons; top plates to be 10 lbs. per sq. ft. and margin plates 12 lbs. per sq. ft., lower part attached to shell plating by 3 x 3 x 7.2 lbs angles. Laps to be single riveted and butts double riveted. Each end of double bottom to be made into a feed tank for boiler use, by fitting a watertight floor. ~~Two~~ a sluice valve fitted in each tank end.

Frames—3½ in. x 3 in. x 7.9 lbs. plain angles spaced 24 in. centers between collision bulkheads and 15 in. centers beyond bulkheads. To extend in one length from margin plate to deck stringer.

Frames in double bottom, 3 x 3 x 7.2 ~~2½ in. x 2½ in. x 5.1~~ lbs. angles.

Reverse Frames—2½ in. x 2½ in. x 5.1 lbs. plain angles, every alternate bar to extend along top of floors to deck, and the intermediate ones to 5 ins. beyond bilge keelson. To be double under engines and boilers, the extra reverse frame to extend to bilge keelson.

Floors—On every frame 36 in. deep double bottom and 15 lbs. per sq. ft. weight, to be increased in depth at each end and to be 18 lbs. per sq. ft. under engines and at boiler saddles. To be secured to centre keelson by double angles 3 in. x 3 in. x 7.2 lbs. Lightening holes

to be cut in each floor, and necessary limber holes. Floors attached to double bottom and marginal plates by single 2½ in. x 2½ in. x 5.1 lbs. angles.

Belt Frames—Four per side, 14 in. wide x 12½ lbs. faced with double 2½ in. x 2½ in. x 5.1 lb. angles in one length. Joints to have treble riveted butt straps.

Stern Frames—Of cast steel, in two pieces, and scarphed if found desirable, the propeller post to be 6 in. x 4 in. Heels extending into vessel to be 6 ft. long, ends to be scarphed 22 in. for connecting to keel; the rudder post to 6 in. x 3½; the end post to be 6 in. x 3 in. as shown on plan.

Rudders—Two of cast steel, stocks 4½ in. in diameter. One pintle at bottom.

To be plated.

Deck Beams—5 in. x 3 in. x 11.2 lbs. angles on every frame connected to frame by gusset plates 18 in. x 18 in. x 12½ lb. At bulkhead beams to be double 3½ in. x 3 in. x 7.9 lb. angles. Alternate beams to be continuous from guard to guard, to be collared where they pass through sheer strake.

Sister Keelsons—One each side, 4 in. x 3 in. x 8½ lb. angles, continuous along top of floors.

Bilge Keelsons—One each side, 4 in. x 3 in. x 8½ lb. continuous double angles, riveted back to back.

Stringers—One each side, 4 in. x 3 in. x 8½ lb. angles, double, continuous, riveted back to back.

Keelsons to extend as far into ends of vessel as possible and end in breast hooks where practicable. Keelsons to be bracketed to watertight bulkheads, and not to be run through them.

Shell Plating—Sheer strake to be 17½ lbs. per sq. ft.

Water line strake 17½ lbs. and for distance of thirty feet from each end to be increased to 20 lbs. Sides, bilge and bottom, 15 lbs.

Garboard to be 17½ lbs.

Plating to be arranged inside and outside alternately with solid liners between outside strakes and frames. At bulkheads the liners to be diamond shape extending far enough from each side of frame to get in row of rivets.

The landings generally to be single riveted; the garboard to bottom and sheer to sides to be double riveted. Butts to be lapped and treble riveted.

Main Stringer—To be 66 in. wide and 15 lbs. thick, connected to sheer strake by angle bar 3 in. x 3 in x 7.2 lbs. Butts of stringer to be lapped and treble riveted.

Deck Tie Plates—One at each side of centre house; 24 in. x 15 lbs., to extend to deck plating at each end.

Deck Plating—In way of the boilers deck to be covered with 7½ lb. plates.

Guards—The lower rim plate to be 10 in. wide x 15 lbs. The face plate to be 12 in. deep x 15 lbs., secured to stringer by continuous 3 in. x 3 in. x 7.2 lb. angles at top and bottom, and to ends of beams by clips.

The guard brace to be 2½ in. diameter, solid, secured to beams and shell plating by forged head and feet, flanges of each to be of suitable size for 4 ¾ in. rivets; these braces to be fitted on every other guard beam.

Bulkheads—To have five watertight. The watertight bulkheads to be made of 10 lb. plates. To be stiffened vertically by 3½ in. x 3 in. x 7.9 lb. angles, spaced 24 in. apart, and horizontally be 3½ in. x 3 in. x 7.9 lb. angles 48 in. apart. The frames of these bulkheads to be double. Each bulkhead to have * ~~gate valve worked from below~~ and a hinged watertight door.

Keelsons to be firmly bracketed at each side of bulkheads instead of running through.

Ridge Bars—One double 4 in. x 3 in. x 8½ lb. angle ridge bar to be fitted on each side, secured to deck beams by angle clips ~~12~~ 9" in. long of 3 in. x 3 in. x 7.2 lb. angles.

Stanchions—To be fitted under ridge bars, and at centre where practicable, of 3 in. extra heavy wrought iron pipe having malleable cast heads and feet.

* two sluice valves fitted in bilges, except collision bulkheads which will have small cock for draining.

Riveting—The keel and side bars to be attached by a single row of ⅝ in. rivets spaced about 25 in. centres. The garboard to be double riveted to keel. Stern frames to be double riveted. Landings of sheer strake to side plating double riveted and garboard to bottom plates to be double riveted; remainder of landings single riveted. Shell butts lapped and treble riveted.

Steel—Inspection Clauses—Plates to be of open hearth steel of about 60,000 lbs. tensile strength, with elongation in 8 inches, of 20 per cent.

Angles of mild steel to stand bending under a hammer cold until the two edges meet or opening to an angle of 140 degrees without showing crack or flaw.

Rivets of mild tough steel having tensile strength of 50,000 to 55,000 lbs. per sq. in., each capable of being doubled back on itself cold without cracking.

Engine Foundation—Double bottom to be strengthened in way of engine bedplate, and if necessary the top plating to be hollowed out in way of connecting rods, etc. Foundation plating to be 25 lbs. per sq. ft. substantially riveted.

Boiler Saddles—To be built of plates and angles amply strong and of shape as may be required.

Thrust and Pedestal Foundations--Built up of plates and angles as may be necessary.

Coal Bunkers--To contain about ~~25~~ 30 tons of coal. Bulkhead to be of 10 lb. plates with 3 in. x 3 in. x 7.2 angle stiffeners where necessary, spaced 22 in. apart. To have two 17 in. cast iron coaling scuttles on each side of main deck, necessary slatted doors in fire rooms. Bottoms of bunkers to be laid with 2 in. yellow pine.

Center House--Of steel, over engines and boilers, between main and cabin decks, and over boilers above cabin deck. Main deck coamings to be 12 in. deep x 10 lbs. secured to tie plates by 3 in. x 3 in. x 7.2 lb. angles. Sides of house to be 8 lbs. per sq. ft. from main to cabin deck and 6 lbs. from cabin deck to above hurricane deck. To be plated vertically and stiffened by Tee bars 4 in. x 2½ in. x 6.1 lbs. At the level of the cabin deck suitable brackets of plates and angles are to be riveted to house for supporting the wood ridge bars and carline. A steel bulkhead dividing engine and boiler spaces to be run up inside house from main to hurricane decks. Necessary hinged steel doors to be fitted at each side for access to engine and boiler rooms. Doors to have brass locks and hinges.

Rudder Carrier, Etc.—Weight of rudder to be taken on cast iron base plate firmly bolted to fountain plate built in vessel. To have composition ring with large surface, stock to be grooved for the cast iron collars. An iron casting to be fitted on the deck above rudder stock and an eye bolt screwed into end of stock for handling rudder.

Gag Pins—To be arranged to work in hole provided in quadrants. An iron casting to be fitted at deck with portable plant for handling pins.

Quadrants—Of cast steel, secured to stocks with two keys. The quadrants to be arranged for gag pins.

& Hand combined hand and

Steam Steering Gear—A steam steering engine of suitable size to be placed at each end of vessel under pilot houses, connected by vertical shafts and cut gears to hand wheels* ~~about 30 in. diameter~~, the columns and gears in pilot house to be of brass. Arranged so that

* in pilot house and
having device to throw
from steam to hand
gear from pilot house
to engine below.

engines can be disconnected in pilot house. Drums of engines made for ¾ in. diameter steel and wire rope. The sheaves of cast iron for wire rope to be not less than 16 in. diameter. Quadrants arranged for ⅝ in. chain with suitable cast iron sheaves, the connections between wire rope and chain to be ⅜ in. steel wire rope. Lignum vitæ rollers and steel pins in suitable brackets attached to beams for carrying ropes.

~~**Hand Steering Gear**--To have hard wood hand wheel 5½ ft. diameter with hard wood barrels in each pilot house, to be connected to the steering ropes below by means of Manila rope with purchase blocks. Those hands wheels to turn at the same time steam gears, or may be disconnected below if desired.~~

Stanchions

Safety Gates—~~Cast iron posts~~ to be fitted at each end and with brackets ~~cast on~~ for attachment of gates. The gates to be folding,

made up of 1½ x ½ in channels with five riveted pivots in each bar 10 in. apart.

Side Lights--To have 20 brass frame hinged lights, glasses ¾ in. thick x 9 in. diameter in clear, each to have two ring nuts, rubber joints, etc. No shutters.

Scuppers—To have necessary scuppers on main deck ~~of 2 in. heavy iron pipe connecting with iron castings let into main deck.~~ Scuppers from cabin ~~where required.~~

Cementing—Inside of hull up to turn of bilges to be coated with composition of cement of domestic manufacture, fresh water and sand, ⅓ and ⅔ of each respectively. To be thick enough to cover heads of rivets in frames and plates and at bottom to depth to cover frames up to limber holes. Plates to be

* outside of cabin. to be of pipe carried through the guard.

⊕ to be small cast iron hatches with hinged lids under seats in corners of cabin.

thoroughly cleaned and rust removed before cementing.

Ship Carpentry—Main deck to be of Oregon pine, ~~[illegible]~~ 1¼ in. x 3 in., to be in long lengths, well seasoned; care to be taken to lay the heart side down. To be fastened alternately by lag screws and ~~[illegible]~~ ½ in. galvanized iron bolts with wood plugs over heads and to be set upon under side with nut and washer. One bolt in each plank in each beam.

Deck to be caulked with two threads of oakum and one of cotton, and payed with white lead and putty.

Coamings—At centre house, of yellow pine, 4 in. x 10 in.

Plank Sheer—Of yellow pine, 4 in. x 14 in., in as long lengths as possible, with hook scarphs 48 in. long, fastened with ¾ in. edge bolts clinches over washers. To be fastened to guard stringer by ¾ in. bolts three in each beam space set up with nuts and washers underneath and the heads plugged.

Rail—Of white oak, 6 in. x 3 in. Stanchions to be 4 in. x 4 in., of white oak, 42 in. centres, tenoned into plank sheer and rail and bolted. On top of rail at ends beyond hoods to have Tee bars 2 in. x 2 in. x 3½ lbs., fastened with screws.

Fender—Of yellow pine 4 in. x 12" in. in as long lengths as possible. Scarphs in side 38 in. long fastened to face plate and angles with ¾ in. galvanized iron bolts 38 in. apart in each row set up with nuts and washers. Fender to be faced with wearing piece of white oak 3 in. x 12" in. fastened by ½ in. galvanized iron spikes 6 in. long. Staving to be worked at end and covered for a distance of about 45 ft. round

with flat bars fastened with countersunk head nails about 12 in. apart.

Fantails—These to be made to suit the present Ferry Slips at Ellis Island.

Deck Fittings—To have one iron cleat and two chocks on each quarter. One heavy mooring ring on each quarter.

Boats and Davits—To have two metallic life boats 16 ft. long with canvas covers, oars, etc., complete, each boat to have a pair of davits, 3 in. diameter. Boats to be located on hurricane deck. Cradles of yellow pine. All necessary blocks, falls, etc., for handling boats to be supplied.

Compasses—To have one 9 in. liquid compass in brass binnacle in each pilot house.

Stands of wood, fitted with necessary lamps and properly adjusted.

Flag Poles—To have two poles about 16 ft. long with truck halyards and blocks.

Lights—To have two double side running lights of copper, with suitable light-boards located on hurricane deck. Two gilded galvanized iron lanterns, one on each pilot house.

Fire Pipes—A line or 2½ in. galvanized iron pipe to run from fire pumps in engine room fore and aft under main deck and to be fitted with risers in center house to be arranged for two outlets on main deck, two in cabin and one on upper deck. Each outlet to have brass globe valve with standard gas thread coupling.

Speaking Tubes—Of brass to run from each pilot house to engine room.

Heating—Main deck, cabin and upper cabin to have iron pipes under seats; toilet rooms, sick bay, brig, and crew's room to have coils of iron pipe; commissioner's room to have radiator, pilot houses to have coils of brass pipes.

Joinery—The main deck to be enclosed, forming one large cabin with a toilet room on each side; an upper cabin above this for employees reached from main deck by central stairway.

A commissioners room at boiler end for upper cabin, a pilot house at each end of boat.

Accommodation for eight men in hold.

The general arrangement of joinery to be in accordance with the plan submitted.

The joiner work to be substantial and first class in every way, the frame work, sills, and carlins to be of Oregon pine.

Main Deck Cabin—On the outside to be staved with white pine to height of rail, above rail to be white pine tongued and grooved, running fore and aft.

Inside to have large panels of canvas with stiles, rails and mouldings of plain oak. Carlins and roof boards beaded and exposed.

Cornices, Etc., of white pine.

To have 17 windows in each side, glass to be American plate 3-16 in. thick, frames to be of oak, and arranged to slide fore and aft.

Toilet Rooms—One on each side of main deck, each to have six W.·C. S. with overhead flushing tanks, and short partitions of plain oak staving and venetian doors.

Side of men's room to be continued to from brig and sick bay, the latter to have four stationary berths, fronts and caps of plain oak. The sides and ends of toilet rooms to be sheathed with white pine, floor to be covered with cement with proper drains, stiles to be painted on same and be panelled with canvas same as other

parts; doors to toilet, etc., to be panelled oak.

Centre House—To be properly insulated * and ~~panelled with canvas, and plain oak stiles, rails and mouldings~~; cornices of white pine.

Upper Cabin—On the outside to be sheathed with tongued and grooved white pine running fore and aft, to window caps, above this to be panelled. Inside to be panelled with canvas same as main deck cabin, carlins and roofs boards beaded and exposed, cornices of white pine.

To have about 15 windows in each side, glass to be American plate 3-16 in. thick; frames of oak and arranged to slide fore and aft.

Commissioners room made in same way as cabin, to have four windows per side, to have one large upholstered locker seat, and one swing table of oak.

Seats—In main and upper cabins of slatted plain oak on spruce frames, without arms. Top of upper cabin to extend to sides of boat, from aft end of each pilot houses, supported by wooden stanchions.

Doors—At ends of main cabin, to be double, of oak, with plate glass in upper panels.

Doors in upper cabin and Commissioner's room single, of oak, panelled.

Stairway—To upper cabin, of plain oak, newel posts, balisters, and rail of oak, rubber treads and brass nosings.

Pilot Houses—Outside to be staved with tongued and grooved white pine to window caps; windows arranged to drop into pockets, inside to be white pine neatly grained; floor of plain oak; locker seat in after ends, to have canvas hook vizor on gal. iron frame; panelled

* finished with steel exposed, flush plated and riveted; painted to suit surrounding joinery.

This applies to both cabin and boiler casing on main deck and to boiler casing in upper saloon, the upper engine casing, or skylight well, being of wood as specified.

doors of white pine and outside steps on each side of house.

Floors—Main deck to be properly planed and exposed.

Upper cabin to have linoleum.

Commissioner's room, linoleum.

Toilet rooms, to be painted.

Hardware—Of first class make, of brass throughout; doors to main cabin to have Blounts checks.

Canvas—On hurricane deck and pilot houses, etc., to be of No. 6 cotton duck fastened with galvanized iron tacks.

Rail and Netting—Yellow pine rail with galvanized wire netting to be run round the upper cabin deck.

Skylight—One, a frame skylight of hardwood over engine room about 8 ft. 0 in. long with suitable rods, etc., for opening from below.

Crew's Quarters—Room in hold to be fitted up with eight berths for crew; sides to be tougued and grooved.

Berths to be pipe bunks having canvas bottoms laced therein.

At the option of the Commissioner of Immigration, at any time expressed wtihin six weeks after the contract, if any, to be entered into, takes effect, we will, without additional cost, rearrange the upper deckhouse, including the creation of two deck houses in the place of one, in such manner as the Commissioner of Immigration shall indicate.

Painting—Hull—All steel work of vessel to have two coats of good red lead and zinc paint, and a final coat of approved color, to be applied when work is completed on inside, and two final coats on outside. All facing surfaces of seams and angles to have two coats of paint before being put together.

Joinery—All inside work is to be thoroughly primed on back with coat of best shellac or white lead and linseed oil before work is put together. All tenons and mortises to be painted before joining together. All exterior work to be given three good coats of best oil paint, the colors and striping to be approved. The final coat to be applied when vessel is nearly ready for service and to be covered with two coats of best spar varnish, also such inscriptions on interior of boat as the Department may designate.

General Clause—The construction and work mentioned in this specification to be subject to the approval of such inspector as the Commissioner General of Immigration may designate. Machinery to be tried at the wharf and afterwards on trial trip and proved efficient and in good working order.

It is the intent of this specification to provide for a first class and in every way fully equipped ferry boat, able and ready to perform usual ferry service, except that the equipment of such ferry boat shall not include the following: Electric light plant, hawsers, ground tackle, portable fire appliances, hose, life preservers or other deck equipment, but does include two metallic lifeboats, each 16 ft. long, with necessary davits and falls.

This ferry boat shall be completed and delivered in New York Harbor, ready for service, within six and one-half months from the date of the approval of the bond to be attached to the formal contract to be entered into in form satisfactory to the Department in the event of its acceptance of this specification.

Machinery—Engines to be two cylinder compound, surface condensing with two cranks.

Cylinders—18 in.-36 in. diameter with stroke of 24 in. High pressure to have piston valves and the low pressure one double ported slide valve. The piston valve to have separate liners and slide valve of low pressure to have loose valve face. Each cylinder to have relief valve at top and bottom, drain cocks on bottoms of cylinders and drain valves on steam chest bottom. A safety valve to be fitted on low pressure receiver.

Indicator pipes with three way cock on each cylinder and necessary attachments on engine for taking indicator diagrams.

Cylinders and steam chest to be covered with non conducting material aud lagged with planished iron or mahogany held on by brass screws.

Pistons—Of cast iron, each to have two ring rings of cast iron. Followers of cast iron eld in place by square headed bolts screwed to brass bushes.

Cylinder Covers—Of cast iron, turned on anges only. Cast open and well ribbed nd to have plates of rolled steel on top.

Valves—Of cast iron; the piston valve to have deep packing ring with cut in one side for adjustment. To be attached to stems by nuts on tops and washers below.

Steam Chest Covers—Of cast iron, machined on flanges.

Piston Rods—Of forged steel tapered at top and bottom for fitting into pistons and crossheads; held in place by wrought iron nuts.

Crossheads—Of forged steel, with two pins for upper end of connecting rod boxes. Shoes of cast iron securely bolted to crossheads. Suitable design for a bar guide. The wearing faces to be white metal on both sides.

Crosshead Guides—Of cast iron, hollow bar type bolted to back columns, arranged for water circulations.

Connecting Rods—Of forged steel 2¼ times the stroke between centres, to have bolt and nut connections at both ends, upper ends to have two boxes of composition with forged caps, lower ends to have circular boxes composition lined with white brass.

Bed Plates—Of cast iron, box form, suitable depth, to have four main bearings or ample surface; the bottom boxes square of composition lined with white brass, the upper boxes of cast iron forming the cap and lined with white brass; large oil boxes to be cast with these caps. Bolts to be of cold rolled steel held in place by wrought iron hexagon nuts at top and square nuts let into recesses at bottom.

Columns—Those at front to be polished steel forgings; those at the back to be cast iron box form cast with condenser.

Crank Shaft—Shaft to be built up type, shafting and pins of forged steel and the webs of cast steel machined on sides.

Valve Gear—To be of Stephenson link type. To have double bar links of steel with pins forced in and riveted. Link blocks of forged steel with composition gibs. Eccentric rods of forged iron or steel, upper ends to be forked and fitted with adjustable brass boxes with bolt and nut connections.

Eccentric sheaves of cast iron in two pieces.

Eccentric straps of cast iron lined with white brass.

Valve stems of forged steel, bottom ends to have adjustable circular bushes; to be guided in adjustable brass boxes, the brackets carrying these to contain lower stuffing box.

Suspension links of forged steel with adjustable bushes in ends.

Reversing Gear—To consist of a vertical steam cylinder connected to cast steel arm on reversing shaft with handles and rods conveniently located for working. The two cast steel arms for the links to have slots and screws for varying the cut-off. Arms to be machined on faces only. Reversing shaft of steel carried in

brackets. Passover valve fitted to L. P. receiver. All handles to be conveniently placed at starting platform in lower engine rrom.

Throttle Valve—Of balanced type, cast iron body and brass fittings.

Metallic Packing—Stuffing boxes of piston rods and valve stems to be fitted with metallic packing, brass neck bushes and brass lined glands.

Shafting—Of forged steel with solid couplings and thrust collars, turned bright on couplings and in way of bearings. The propeller shafts to have two brass sleeves. The after ends to be tapered for fitting to propellers. These to be held in place by forged iron nuts and steel feathers.

Thrust Bearings—Of horseshoe type, with collars of cast iron faced with white brass, collars to be carried on steel bolts and to be adjustable separately.

Shaft Bearings—Of cast iron, bottom lined with white brass and fitted with cast iron caps.

Turning Gear—The turning to be done by hand with cast iron worm, wheel, and ratchet.

Stern Tubes—Of cast iron, after ends fitted with brass bush filled with lignumvitae strips; forward ends to have brass bush, stuffing box, and brass-lined gland. Tubes to be held in place by cast iron nuts.

Condensers—Shell to be of cast iron, rectangular. To contain about 950 sq. ft. of condensing surface. The tubes to be brass, tinned inside and outside, packed with cord and screw ferrules, arranged in two sections. Tube sheets of rolled sheet brass.

To have all necessary hand holes, extra feed connections, carriers for heads, etc.

Propellers—To be four-bladed, about 7 ft. 0 in. diameter, solid cast iron.

Feed Water Heater—An efficient heater to be fitted with all necessary valves, etc.

Lubrication—All working parts and pins to have oil boxes to be fed by hand. Strong cast iron drip pans to be fitted under guide bars.

Water Service—Galvanized iron pipe at back of engines with connections to guides, and with necessary pipes, etc., for running water on crank pins and main journals.

Piping—Main steam, auxiliary steam above 2 in. diameter, main and auxiliary feeds, surface and bottom blows, suction and discharge pipes connecting air, circulating, feed and donkey pumps,—to be of copper; escape pipes above deck of copper, below deck of galvanized iron. Auxiliary steam piping below 2 in. diam. of brass. Auxiliary exhaust piping of galv. iron. Bilge pipes of galv. iron. Sanitary piping, galv. iron.

Flanges—Those for main and auxiliary steam, feed and blow pipes of composition. Flanges on water and exhaust piping generally to be of cast iron.

Tees and Fittings—On main steam and all other pressure pipes above 3 in. diameter to be cast steel. Those on feed, blow, auxiliary steam, etc., below 3 in., of composition. Those in connection with suction, exhaust and discharge pipes, of cast iron.

Sea Suction and Discharge Valves—To be of cast iron with brass seats and valves.

Ladders and Gratings—To be fitted to make all parts of engines and boilers accessible; grating to be of wrought iron; engine room ladder to have double bar steps. Hand rails in engine room to be wrought iron, bright. Those in boiler rooms of wrought iron pipe.

Floor Plates—Those in front of and near back of engines to be rolled steel. Those in the fire rooms of cast iron, supported on angle framing.

Travellers and Lifting Gear—One double wheel traveller with centre plate for attaching purchase block for cylinder heads, etc., also small traveller and beam for condenser bonnets.

Wrenches—A complete set of wrenches for all nuts in connection with machinery, also necessary box and light wrenches for small nuts, placed in rack in engine room.

Gauges, Etc.—One for H. P. steam, one compound, and one vacuum in engine room. Also one eight day clock. All 8 in. diameter, fitted up on hardwood board.

Filter Tank—Rectangular, constructed of steel plates, with hinged steel plate lid.

Engine-Room Bells—The usual gong and

jingle bell to be fitted in engine-room with connections to each pilot house.

Direction Indicators—Positive mechanical connections to be made between a handle in each pilot house and an arrow in engine room, indicating the direction in which boat is running.

Whistle—A large organ whistle to be fitted at side of stack with suitable connections to each pilot house.

Pumps—Circulating—One centrifugal, worked by separate engine.

Air—One vertical twin cylinder twin pump, brass lined.

Feed—One vertical duplex, brass lined, to pump from filter, fresh water tanks and discharge into boilers.

Fire—Horizontal duplex, brass lined, to

pump from sea, bilges, bottom of condenser and filter, and discharge into boilers, on deck, overboard, and through condenser.

Sanitary—One horizontal duplex, to pump from sea and discharge through water circulation pipes and to toilet rooms.

All valves, gauges, steam steering gear, circulating pump, feed, fire and sanitary pumps and similar articles to be of approved type and pattern.

Boilers—To have two single ended Scotch type boilers, 10 ft. 0 in. mean diameter x 12 ft. 0 in. long, to be constructed in accordance with U. S. inspection requirements for a working pressure of 135 lbs. sq. in. Each to have two furnaces of the Brown latest type, connected to single combustion chamber. Tubes to be 3 in. diameter charcoal iron. Grate surface in two boilers, 82 sq. ft.; bars 6 ft. 6 in. long. Heating surface in two boilers about 2280 sq. ft. All necessary man and hand holes. Each boiler to have all necessary grate bars, bridges, fronts, baffle plates, etc.

Smoke Boxes—Of steel plates, amply strong, with hinged doors, air casings, etc.

Stacks—One, of steel plates, with all necessary guys, dampers, etc.

Mountings—Each boiler to have independent stop valve for main and auxiliary steams, spring safety valve, main and donkey checks, surface and bottom blow valves, water gauge column and automatic gauge cocks, whistle valve. All valves of yoke type; the feeds and blows of composition.

Injectors—One, double tube.

Ejector—One bilge ejector in engine room with 2½ in. suction connection.

Ash Hoist—Suitable means to be provided for getting ashes from fire rooms to deck.

Ash Valve—A valve and length of rubber hose in fire room for wetting ashes.

Boiler and Pipe Covering—Main boilers and all main and auxiliary steam supply pipes to be efficiently covered with H. W. Johns or other equivalent non-conducting material well secured.

Boilers to have hard finish carried well down.

Pipes to be jacketed with canvas over non-conducting material.

Deck Pump—Worked by hand, to be fitted as required by U. S. Inspector.

Tools and Outfit—Necessary firing tools for main boilers.

Special and light wrenches for engines and boilers.

Oil tanks, waste can.

Hammers, chisels, files, etc.

Ash buckets, blocks and falls.

Ratchet and drills.

Vise and bench.

The builder will at the option of the Department, provide all valves attached to hull including the sea valves, with brass or composition bodies in lieu of iron bodies, at extra cost as understood.

Electric Lighting—Plant to be supplied by owners.

APPENDIX B

Specification for all Labor and Materials Required for Docking, Cleaning, Painting and Machine Repairs on the Steel Hull Ferryboat "Ellis Island," of the U. S. Immigrant Station, Ellis Island, N. Y. H.

SPECIFICATIONS

FOR ALL LABOR AND MATERIALS REQUIRED FOR DOCKING, CLEANING, PAINTING, AND MACHINE REPAIRS ON THE STEEL HULL FERRYBOAT "ELLIS ISLAND", OF THE U.S. IMMIGRANT STATION, ELLIS ISLAND, N. Y. H.

****

CHARACTER OF WORK:

It is the intent of this specification to provide for docking, cleaning, painting and machine repairs on the ferryboat "Ellis Island" the whole to form a complete job as hereinafter specified. The boat is of the following dimensions:-

Length over all	160' 0"
Length over stern posts	154' 0"
Beam of hull at deck	37' 0"
Beam over guards	45' 0"
Depth at center to top of beam . . .	15' 0"

Tonnage, about 800 gross.

No docking plans are in existence. Bidders must visit the boat, inform themselves of all governing conditions, take their own measurements if any are required, and include in their estimate, all items of labor and materials required or necessarily implied for the entire completion of the work, in accordance with the intent of this specification, whether separately mentioned or not.

DRAWINGS:

No drawing accompanies this specification.

SCOPE OF WORK:

Vessel shall be carefully docked or hauled out on a marine railway of approved type, strength, and size. In either case, dock or marine railway must becconveniently located and of form and type specifically approved.

While being docked or hauledoout and while in dock or on railway, vessel must at all times bepproperly and substantially blocked, choked and shored. From time vessel is delivered and secured at site of contractor's dock or railway, she will be at contractor's risk until work specified is completed, and vessel relaunched or returned to water as the case may be, and turned over and accepted in writing by the Commissioner of Immigration. Should, however, the Chief Engineer be satisfied that vessel has been detained at site of contractor's railway or dock from any cause for which the United States is responsible, she while so laying, be at the risk of the United States.

CAULKING:

Any leaky butt straps, joints, seams or rivets that may require caulking, shall then be carefully caulked in approved manner, as directed. Should, however, any new plating, new strapping or new riveting be required, same bill will be allowed for at a reasonable extra, as will cost of any necessary additional structural or machine repairs not specifically described or called for in this specification, provided same are ordered by due authority.

OUTSIDE SCRAPING AND CLEANING:

The outside of hull, including rudder, propellers, stern castings, plating or underside of main deck overhang, underside of guards, struts, etc. shall be thoroughly wire brushed and cleaned.

Any plates in any way pitted shall be cleaned bright and depressions filled with metallic cement, so as to bring the cavities flush with the normal surface surrounding same. All strainers and outside of all valves above and below water line shall be cleaned and scraped as heretofore specified.

Both in cleaning and painting bottom and sides of vessel, provision must be made to take out or change position successively of shores and braces or blocks, so that entire hull may receive external cleaning and painting as specified. No paint shall be applied to outside of hull until cleaning work has been inspected and accepted by the Chief Engineer.

OUTSIDE HULL PAINTING:

Preliminary work heretofore named having been completed, top sides of vessel from water line, up to line of main deck plank sheer, including guards, rudders, stern castings, etc., shall be given two coats of best quality boot-top or some other approved brand of metallic paint suitable for this purpose. Finishing tint to be red with draught figures in white.

Entire bottom sides of vessel from water line down, including rudder, propellers, stern castings, etc., shall receive one touch up coat and one full coat of approved anti-corrosive composition and one full coat of approved antifouling paint or composition, "Miller's" compound or equal.

Pins and rods; brasses of same fitted and adjusted.

Parting pieces planed for liners.

REPAIRS TO MAIN ENGINE LOW PRESSURE:

Remove crank pin brases; remetal, scrape and fit same.

Throttle valve to be reseated and ground in.

Pins of same throughout renewed where necessary.

REPAIRS TO MAIN ENGINE HIGH PRESSURE:

Brasses for crosshead pins to be turned and fitted.

Parting pieces for liners to be planed.

Remetal crank pin brasses and scrape and fit same.

Reseat relief valves top and bottom for both high pressure and low pressure engines.

REVERSING ENGINE:

Four cushion springs extra heavy.

DYNAMO REPAIRS:

New rings in pistons and valve.

Remetal crosshead ends of rods and fit and turn pins.

CONDENSER REPAIRS:

Remove both heads and make division plate section watertight.

Repack and make tight all tubes.

Replace and worn and corroded nuts and make the condenser perfectly watertight.

Scale and clean.

Composition specifically approved by Chief Engineer as bottom paint must be delivered in original packages, and opened only as required for use. It must be applied as its makers require or suggest. Before any painting specified is performed, surfaces must not only be cleaned as required, but be thoroughly dry in order to insure proper setting of paint, cement or composition. An interval of not less than 18 hours must elapse between successive coats of paint above water line, unless some quick drying brand of paint is approved for the work.

Outside painting below water line must not be performed until after all other work needful to be done while vessel is in dock, is completed, in order that as soon as practicable after application, bottom painting may become wet.

MACHINE REPAIRS

SHAFTING AND THRUSTS:

Repack stern bearings at both ends.

Renew Lignum-vitae bushings, both ends.

Turning gear for main engine to be fitted with a 1" bolt to prevent slipping.

Wiring and sheaves on bell pull system overhauled.

Whistle wiring overhauled.

HIGH PRESSURE VALVES:

New Collars for high pressure valve.

Guide bars draw-filed and gibs fitted.

Copper pipe inlet and discharge from condenser to be repaired or nenewed as may be required.

AIR PUMP REPAIRS:

Overhaul metallic packing.

Furnish new valve rod.

All pine in beams trued up and links adjusted and fitted.

CIRCULATING ENGINE:

Furnish new piston rings.

Slide vavle seat and face planed.

Eccentric strap and sheave scraped and fitted.

Crosshead and crank pin brasses and pins turned and fitted.

Main injection valve and bilge injection overhauled and racked.

REPAIRS TO STEERING APPARATUS:

Furnish two new controlling valve rods.

Renew metal packing for all rods.

Crank pins turned an all brasses scraped and fitted.

Crosshead pins and brasses repaired.

Renew all drain valves on both engines.

Bottom of main rods for gear wheels raised and fastened.

Thrust gear overhauled.

New oil carriers installed.

Steering apparatus in Pilot houses overhauled.

Now bushings for shafts in standards.

Gear wheels bushed.

New keys fitted.

Sprocket wheel for carrying messenger chains to be bushed on new pins and properly fastened.

All pins in sheaves to be removed and renewed and rollers renewed.

Remove old deck casting for large gag pin and put new casting, on hand, in its place.

BOILER REPAIRS:

In addition to repairs ordered by the local steamboat inspectors the following repairs shall be made.

Reseat and grind in both safety valves, main and auxiliary stop valves, bottom and surface blow-off valves and both whistle valves. Joints to be made tight with Tauril packing.

Furnish eight (8) new valve disks for main and injector feed valves and reseat and grind in.

One (1) new valve stem to be installed.

All joints on injector feed line to be renewed with Tauril packing or equal.

Drain plug valves on bottom of boilers renewed.

Furnish and install six (6) new fusible plugs.

All "Dogs" on connection doors repaired or renewed.

New rods for boiler doors.

Four (4) new 1/4" valves in gauge pipes, top of boiler.

Four (4) new valves for water gauges.

One set of boiler door lining.

One set of cheek pieces for furnace front.

Two (2) new hoe handles same as old ones, the old ones to be repaired.

Renew all joints on boilers and piping with Tauril packing.

Recover piping where necessary.

Both boilers scaled, washed and cleaned.

OTHER REPAIRS:

New valve for heater, main line.

New valves for heaters in Pilot Houses, upper cabins and Commissioner's cabin.

New angle valve for crank pit ejection.

Water tanks to be cleaned and cemented.

Traps for heaters overhauled and put in working order.

Furnish one (1) new filling valve, "Globe"type.

*****
***
*

APPENDIX C

Specifications for all Labor and Materials Required for Docking, Scaling, Cleaning, Painting, Alterations, and Machine Repairs on the Steel Hill Ferryboat "Ellis Island," April 1921.

SPECIFICATION

FOR ALL LABOR AND MATERIALS REQUIRED FOR DOCKING, SCALING, CLEANING, PAINTING, ALTERATIONS, AND MACHINE REPAIRS ON THE STEEL HULL FERRYBOAT "ELLIS ISLAND," OF THE U. S. IMMIGRANT STATION ELLIS ISLAND, N. Y. H.

****

CHARACTER OF WORK

It is the intent of this specification to provide for docking, sealing, cleaning, painting, and certain alterations and machine repairs on the ferryboat "Ellis Island," the whole to form a complete job as hereinafter specified. The boat is of the following dimensions:-

Length over all	160' 0"
Length over stern posts	154' 0"
Beam of hull at deck	37' 0"
Beam over guards	45' 0"
Depth at center to top of beam	15' 0"

Tonnage, about 800 gross.

No docking plans are in existance. Bidders must visit the boat, inform themselves of all governing conditions, take their own measurements if any are required, and include in their estimate, all items of labor and materials required or necessarily implied for the entire completion of the work, in accordance with the intent of this specification, and drawings, whether separately mentioned or not.

DRAWINGS:

Two drawings dated at the office of the Commissioner, April 22, 1921, and designated:-

1 -- Plan and sections
2 -- Plan of main deck

accompany this specification. General character of detail work is shown on drawings, but minor modifications may be made with approval of Chief Engineer.

It is intended that drawings and specification shall co-operate and should anything be noted on drawings that is not mentioned on specification, or vice versa, same must be executed as if occurring in both. It is also intended that all figures and dimensions on drawings shall agree, our contractor shall check same before commencing work, and any discrepancies must at once be referred to the Chief Engineer for adjustment, and failure to do so will in no way relieve contractor from necessity of correcting without expense to the Government, any errors that may occur in the work by reason of such neglect.

Contractors shall furnish detail drawings in duplicate of new stairway, range pole and new deck house doors for the approval of the Chief Engineer.

SCOPE OF WORK:-

Vessel shall be carefully docked or hauled out on a marine railway of approved type, strength and size. In either case, dock or marine railway must be conveniently located and of form and type specifically approved.

While being docked or hauled out and while in dock or on railway, vessel must at all times be properly and substantially blocked, chocked, and shored. From time vessel is delivered and secured at site of contractor's dock or railway, she will be at contractor's risk until work specified is completed, and vessel relaunched or returned to water as the case may be, and turned over and accepted in writing by the Commissioner of Immigration. Should, however, the Chief Engineer be satisfied that vessel has been detained at site of contractor's railway or dock from any cause for which the United States is responsible, she while so laying, be at the risk of the United States.

CAULKING:-

Any leaky butt straps, joints, seams or rivets that may require caulking, shall then be carefully caulked in approved manner, as directed. Should, however, any new plating, new strapping or new riveting be required, same will be allowed for at reasonable extra, as will cost of any necessary additional structural or machine repairs not specifically described or called for in this specification, provided same are ordered by due authority.

REMOVAL OF OLD WORK:

Remove exterior stairway marked "A" on drawing with handrail, etc.

Remove brass handrail with stanchions, wood rail, chain, brass guard plate and iron braces on upper deck where exterior stairway starts.

Remove decking, deck beams and seat where necessary to form well hole for stairway marked "C" on the drawing.

On lower deck underneath new stairway remove seat with heating coils, window and sufficient of the deck house and wall to make room for the stairway.

Between the doorway and outside wall of deck house, and along side of same, remove the seats with heating coils inside of new toilets.

Remove all the partitions, berths, floors, tiling, heating coils, toilet fixtures etc. for Engineers, Pilots and Quartermaster's cabins, locker room, wash room and toilets.

Remove coal hole and ventilating covers marked "D".

Remove wooden top flooring or sheathing for entire main deck.

Remove part of Deck house and bulkheads marked "H" to make room for larger doors.

Remove doors marked "I".

Outside stairway, brass handrails with stanchions, brass guard plates, window, and such other materials as will be designated by the Chief Engineer, that have been removed shall be the property of the Government and be left on the boat where directed.

NEW YORK:

Patch and repair upper deck where outside stair "A" has been removed.

Install new seat with wire mesh railing where shown on drawing by letter "B".

NEW STAIRWAY:

Where shown on drawing #1 by letter "C", install new stairway from lower to upper deck. This stairway shall be constructed of well seasoned white oak of quantity equal to other woodwork on the ferry boat. The stair strings shall be made of 12" x 2-1/2" oak, the treads shall be 9-1/2" x 1-1/2" and the rise 7/8" thick.

The treads shall be housed into the strings and the strings shall be stepped into pockets in the lower deck and be securely fastened to supporting beam at the top.

The upper part of the stairs inside of the deck house and wall shall have 7/8" sheathing on the sides down to the top of the string for closing off from the enclosure below.

The handrail shall be of polished brass pipe, 1-1/2" diameter with stanschions of same size securely fastened to the strings in approved manner. The stair treads shall have safety treads of brass 8' wide and 3'8" long fitted with carborundum.

PARTITIONS:

The partitions for enclosure under stairs and the two toilets shall be made of 2" x 4" studs of spruce or cedar, spaced about 16" on centers. The studding for the two toilets shall be sheathed and paneled on both sides to match present paneling.

The enclosure underneath the stairs shall be sheathed and paneled on the outside only. At the floor line on the outside the partitions shall have 6" oak base.

The doors with trim and hardware shall be taken from the best of the old doors that have been removed.

Door marked "G" shall be new 3'6" x 7'10" or the same height as present doors and similar pattern.

Plinth blocks and hardware shall be new.

Install two small windows 10" wide and matching in height the glazed part of the doors marked "K" in the end bulkhead next to the new stairway "C".

Where beams in upper deck have been severed to make room for stairway, contractor shall re-frame so that the deck may be as secure and strong as before.

The four new doors marked "K" shall be of the "Garage Door" pattern of the "Slidetite" type with hardwary of the Richard-Wilcox Mfg. Co. type or equal. The doors shall be 1-7/8" thick and of size as shown on plan. Doors shall be sheathed both sides with #20 gauge galvanized iron. Contractor shall furnish detail drawing of same for approval by the Chief Engineer.

Install new benches where cabins, toilets, etc., have been removed, similar to old benches.

Where cabins, etc. have been removed, contractor shall if necessary put in entire new panels where required or if in the opinion of the Chief Engineer, patching will be satisfactory, this shall be done by the Contractor.

Install eleven (11) new 3" diameter pipe columns with base flanges and caps to match old ones. Columns marked "B", on drawing No. 2.

The tank for drinking water, that must be removed from old location, shall be placed in new location where directed and in a secure and wholly satisfactory manner.

RANGE POLE:

The old range pole after being removed shall have the butt end cut off to the proper length on but end shaped to fit step in supporting frame . The frame with braces shall be made of 2" diameter brass pipe as shown on drawing and with a brass socket securely fastened in approved manner to the frame. The frame shall have the standards and braces secured to the upper deck flooring with brass flange sockets. The braces for the range pole shall be 1-1/4" diameter brass pipe, located as shown on drawing. The collar for these braces shall fit snug to the body of the pole and the braces shall be securely fastened to the deck flooring.

GENERAL REPAIRS

SIGNAL SYSTEM:

The entire signal system from Pilot Houses to Engine room shall be overhauled and provided with new wires, sheaves and chains, and rearranged as directed by the Chief Engineer. The pull wires shall be re-run in a sectional tubing below decks.

The gong shall be readjusted so as to work smoothly.

INDICATORS:

Raise Rush Indicators 18" from present position.

COMPASSES:

Remove compasses in both pilot houses from present position to center between windows and secure same.

MISCELLANEOUS:

Refasten wheels and base of changing gear in both Pilot Houses.

Refasten and re-bush steering wheels and bevel pinion shafts in both Pilot Houses.

All defective wood flooring shall be removed and new put in its place in both Pilot Houses. Floors in both pilot houses shall be reinforced in approved manner. Make new hold with Cast iron frame and cover 12" in diameter at Ellis Island end for anchor chain and put chain inside of bulkhead of end compartment.

DECK RAIL:

Take down deck rails with posts, braces, etc., and discard one half of end sections up to the intermediate vertical at both ends of the boat. Renew all the posts similar to the ones now in use. In place of the intermediate vertical, put in a post which shall be made heavier than other posts and as directed by the Chief Engineer. Provide braces where required and secure posts in rigid manner. The existing rail may be re-used unless split or rotted, and shall be fitted into the new posts similar to old rail. New parts of top or intermediate rail shall be provided where necessary.

All parts to be of clear white oak without shakes or knots.

Replace all of the T guard loafers cushions that are carroded with new ones.

FOLDING GATES:

Contractor shall remove the present folding gates at both ends of the boat and furnish and install new ones of modern and smooth working design. Gates shall be in two parts, one pair at each end of the boat and for full opening.

Gates shall be of "Lazy-tong" pattern and with two uprights for each half, one at the movable end and one central between the two ends. The uprights shall be made of two 2" x 5/8" x 1/4" channels and the diagonals of one 2" x 5/8" x 1/4" channels. The diagonals shall be secured to each other with 1/2" rivets and have 3/16" washers between webs of channels.

The uprights shall be made of two channels of size as previously noted, securely fastened together. Each upright shall have either caster wheel attachment at the bottom or other easy going device for moving across the opening. The movable end posts shall have approved clasp or other locking device. The fixed ends shall be arranged so that the gates can be swung in towards the rail.

Gates shall be painted one coat of red lead and oil before assembling.

Contractor shall furnish detail drawing of gates for approval by the Chief Engineer.

GUARD RAIL:

Remove the present wearing pieces of the guard rail around the entire vessel between the iron guards at ends and install new white oak wearing pieces securely spiked to the backing and properly scarfed to each other.

SHEATHING OF MAIN DECK:

After the top sheathing of the main deck has been removed, contractor shall lay new underflooring where necessary and as directed by the Chief Engineer. Contractor shall re-caulk all parts of under-flooring where required and as directed by the Chief Engineer.

Contractor shall state on proposal sheet unit price per square foot for relaying and caulking of under-flooring and also unit price per square foot for re-caulking of old under-flooring.

The oak boarder pieces at the New York end together with waterproofing for same shall be removed and new border pieces together with water proofing snugly fitted in place. Materials shall be first class white oak free from shakes and knots. At the Ellis Island end the border pieces shall be smoothed down even.

WEARING PLATES:

The cast iron wearing plates at the New York end shall be arranged in new location to suit location of bridge chocks. Plates shall be let down into the border pieces and secured in place in proper manner.

COAL HOLE COVER WITH FRAME:

Where shown on drawing #2 by letter "C", contractor shall install a coal hole, 2'0" x 3'0" frame to be made of angle irons 3" x 3" x 1/4" set flush with the floor, and with a 1" x 1" x 3/16" angle iron shelf for the plate covers. The cover shall be made in two parts of 3/8" checkered rolled plates. Each plate to have two lifting flush handles. The frame angles shall be secured to decking in proper manner. Frame and covers shall be painted one coat of red lead and oil at the shop and two coats of Miller's "Bitumo" or equal before setting in place.

WAIST SHEATHING:

The sheathing on the outside of Main Cabin from guard up to line of deck rail around the entire vessel shall be removed together with rotted and defective studding for same. Provide new studding and splice and secure same to studding above deck rail line. Provide new plate for this studding. The plate and studs to be liberally treated with creosote. Replace rail where rotted or defective.

Provide and install new waist sheathing of 3" wide tongued and grooved yellow pine beaded sheathing boards. At top and the bottom of sheathing provide 1/2" radius quarter round mouldings, secured in place with finishing nails. Nails to be set and holes filled with putty. Wainscot sheathing in main cabin, where rotted and damaged shall be replaced with new sheathing. Replace studding and plate for same where required.

BENCHES:

Where slats for benches are missing or damaged contractors shall repair same.

NEW FLOORING:

In Pilot houses, remove present interlocking rubber flooring and provide and install new flooring of "Linotol" composition or equal. Color selected. Patch rubber flooring in upper cabin.

CANVAS:

Flash all combings etc. with heavy sheet lead where required and patch where necessary to make watertight.

Painting of canvas shall be done as hereinafter specified.

Provide new canvas panels for walls in Commissioners Cabin and for two panels on main deck.

If through tearing down the cabins, toilets, etc., on the main deck, it is found that new canvas panels are required. Contractor shall install same.

Around the outside of the enclosure, underneath new stairway and both in and outside of toilets contractor shall install canvas panels to match the ones on main deck.

Inside of the new toilets the panels will start 6'6" above floor line.

All canvas shall be of quality and thickness as that now in use.

RAILING ON UPPER DECK:

Fill in with wire mesh in one panel where missing and finish off old mesh on either side of same. Remove iron brace on seat near this panel. All wire mesh to be wire brushed for painting.

SLIDING SASH:

Overhaul all sliding sash and make same slide easily and furnish four new sash for the damaged windows.

HARDWARE:

Contractor shall furnish and install the following new hardware:

One lock for each of the four Pilot House doors: (4 locks).

One lock for one of outside doors to upper cabins.

One lock for each of the two new toilets and the enclosure under new stairway; (3 locks).

Locks for the doors, except for Pilot houses which must be new, may be taken from discarded doors if in good condition and satisfactory to the Chief Engineer. Door hinges from old doors may be used if in good condition and satisfactory to the Chief Engineer, otherwise new ones must be provided.

Provided and install new door checks and door hooks where missing.

Replace all broken or missing hardware for windows. Install new hinges on fire room door on main deck.

ANGLE IRON BRACES:

At the New York end of the boat underneath the fantail, contractor shall straighten out structural iron parts that have been bent or displaced.

UPHOLSTERING:

The cushions in Commissioner's Cabin and in both pilot houses shall be taken apart, remade and reupholstered and covered with "Pantasote" equal to new.

COAL HOLE COVERS:

The coal hole covers marked "D" on drawing No. 2 shall be removed and openings closed up in approved manner.

LOCKERS:

Contractor shall furnish and install sheet metal lockers of approved make and pattern; six (6) in the Engine Room and eighteen (18) in compartment back of boiler room. Lockers to rest on a steel plate platform supported from the hull construction by means of angle iron supports. Contractor shall take his own measurements and submit detail drawings for these platforms.

Lockers shall be all sheet steel.

DOORS:

Doors shall be of #22 gauge steel, with sides, top and bottom folded at right angles for rigidity. They shall be further reinforced by stiles and rails formed of #22 gauge steel applied in such manner as to present a deep, sunken panel effect on front side, and a smooth even surface on inner side.

Doors shall be hung on fast joint butts, and equipped with master key locks as per approved sample.

Each door shall have a brass number plate. Doors shall have ventilating louvers with hood turning outward.

UPRIGHTS (SIDES):

Uprights shall be made of #22 gauge steel, formed with a flat front pilaster 9/16" thick and with flange turned at right angles double, folded to form door strike. They shall further be reinforced by being double, folded at top and flanged at bottom.

BACKS:

Backs shall be of #22 gauge steel, flanged and bolted to uprights, top and bottom plates.

TOP PLATES:

Top plates shall be of #20 gauge steel, with 15/15" flat front and flush with front edges of panels. Flanges on either side to extend downward between the sides of the double uprights, and securely bolted to same.

SHELVES:

Each locker shall have one shelve of #22 gauge steel, flanged downward at sides and back and with 5/8" bead at front. Shelves shall be securely bolted to back and sides.

BOTTOM PLATES:

The bottom plates shall be of #20 gauge steel flanged and bolted to sides and back, and front edge turned down to form base.

EQUIPMENT:

Each locker shall be equipped with six double hooks; two on the back and two on each of the sides.

MATERIAL:

All sheets or plates used in the construction of these lockers, shall be of the best open hearth, cold rolled, full pickled and double annealed steel, free from scale, rust or other imperfections. That used for end panels and doors shall be accurately leveled to insure a surface free from buckle or wave.

FINISH:

All material shall be sandpapered and ground to a smooth, even surface, and thoroughly cleaned with Benzine, leaving it free from dirt, oil or rust. After which a coat of mineral filler (a rust preventative) and two coats of best oaking enamel shall be applied to all partes and oaked in a temperature of 150 to 200 degrees. The exposed parts shall then be rubbed to a smooth and even surface with sand-paper or rotten-stone and brushed with a finishing coat of best copal varnish and dried at a temperature of 200 degrees.

The plate platforms with supports shall be painted with one coat of red lead and oil at the shop and two coats of Miller's "Bitumo" or equal after erection. Lockers shall be put together in groups and each separate group of lockers shall be braced to the satisfaction of the Chief Engineer.

PLUMBING

WATER CLOSETS: -

Where shown on plan by letter "E", contractor shall furnish and install a "Torrento" Mott #5538 or equal individual water-closet, with Presto #5535-A nickel plated push button flush valve and direct discharge into water. Two (2) wanted.

One (1) nickel plated brass paper holder for roll per #3643-A.

LAVATORIES:

Where shown by letter "D" contractor shall install a "Berkeley", Mott catalogue #4547-A or equal porcelain enameled iron lavatory with integral back, nickel plated "Hygeia" waste (plug & chain) "Economic" Fuller faucets 1-1/2" direct discharge pipe through the floor and supported by porcelain enameled iron brackets. Two (2) wanted.

Furnish two plate glass mirrors with nickel plated brass frame 24"x18"x3/4" wide, Mott 3670-A or equal. Two nickel plated towel racks 18" long #3524-A Mott or equal.

In the engine room install one enameled "Bergen" lavatory, Mott catalogue #4554 or equal, with patent overflow oval basin, nickel plated plug, chain, chain stay, brass coupling and rubber stopper. Basin to be secured to 3" diameter iron column.

In compartment next to boiler room install a similar lavatory secured with iron brackets to steel bulkhead. Waste to discharge direct into the bilge.

SHOWERS: -

Where shown on plan by letter "M" install a nickel plated 8-1/2" tubular shower with supply pipe and check valves. Two (2) wanted.

FLOOR DRAINS:

Where shown on plan by letter "L" install a cast brass cesspool bell trap 8"x8" for 3" iron pipe, Mott catalogue #3092-A, or equal. Two (2) wanted.

LEAD PANS: -

In the two toilets on Main deck install one lead pan in each, full size of the room resting on top of the under flooring and the sides reaching up 3" above finished floor and with outlet for the bell trap.

The walls shall have zink sheathing to the height of 6'6" secured to the wood sheathing and extending down to floor level overlapping the lead pan. Where the zink reaches up on the canvas panels the top part shall be closed up water tight in approved manner.

The zink sheathing shall have one coat of white lead and oil and three coats of best white enamel.

OUTSIDE SCRAPING AND CLEANING:

The outside of hull, including rudder, propellers, stern castings, plating or underside of main deck overhang, underside of guards, struts, etc., shall be thoroughly scaled with pneumatic tools, wire brushed, and cleaned.

Any plates in any way pitted shall be cleaned bright and depressions filled with metallic cement, so as to bring the cavities flush with the normal surface surrounding same. All strainers and outside of all valves above and below water line shall be cleaned and scraped as heretofore specified.

Both in cleaning and painting bottom and sides of vessel provision must be made to take out or change position successively of shores and braces or blocks, so that entire hull may receive external cleaning and painting as specified. No paint shall be applied to outside of hull untilcleaning work has been inspected and accepted by the Chief Engineer.

OUTSIDE HULL PAINTING:

Preliminary work heretofore named having been completed, top sides of vessel from water line, up to line of main deck plank sheer, including guards, rudders, stern castings, etc., shall be given two coats of best quality boot-top or some other approved brand of metallic paint suitable for this purpose. Finishing tint to be red with draught figures in white.

Be sure bottom sides of vessel from water line down, including rudder, propellers, stern castings, etc., shall receive one touch up coat and one full coat of approved anti-corrosive composition and one full coat of approved antifouling paint or composition, "Millers' coumpound" or equal.

Composition specifically approved by Chief Engineer as bottom paint must be delivered in original packages, and opened only as required for use. It must be applied as its makers require or suggest. Before any painting specified is performed, surfaces must not only be cleaned as required, but be thoroughly dry in order to insure proper setting of paint, cement or composition. An interval of not less than 18 hours must elapse between successive coats of paint above water line, unless some quick drying brand of paint is approved for the work.

Outside painting below water line must not be performed until after all other work needful to be done while vessel is in dock, is completed, in order that as soon as practicable after application, bottom painting may become wet.

INSIDE HULL, CLEANING AND SCRAPING:

The entire inside of hull of vessel below water line of main deck with the exception of the bilges shall be thoroughly scrubbed and cleaned with soda and ammonia. Below the line of floor plating in engine room, fire room and in the bilges all metallic surfaces are to be chipped with pneumatic tools, and scraped clean of all point, whether blistered or not. Above this floor plating, no paint shall be scraped except such as may be found blistered or loose or as specifically noted. Coal bunkers as well as the space below boilers shall be chipped with pneumatic tools same as provided for the bilges. End compartments shall be chipped and cleaned with pneumatic tools. Any portion of cement in bilges found loose shall be chipped away and renewed. The inside of all tanks shall be chipped clean with pneumatic tools.

INSIDE HULL PAINTING:

After all scraping and cleaning specified has been completed all bilges, space below floor plating, undersides of floor plates supporting frame work, coal bunkers, below boilers, outside of tanks, etc., in fact all metallic surfaces below the line of floor plating shall be painted two coats best quality red lead or other paint selected by the Chief Engineer.

Shell plating, bulkheads, frames, deck beams, woodwork, and all other surfaces of structure below line of main deck and not otherwise specified shall be painted two coats of approved quality white lead and oil paint and one coat best quality white enamel as selected by the Chief Engineer.

End compartments after being cleaned in manner specified and inspected by Chief Engineer shall be painted two coats white lead and oil.

In any portion or compartment of hull below main deck as may specifically be directed, two coats white lead and linseed oil may be required in lieu of red lead and oil.

Any and all compartments in hull that are used as water tanks shall be thoroughly scaled and cleaned generally as heretofore specified, but in lieu of painting any tanks or compartments used as such, may received two heavy coats of cement wash successively applied with interval left for drying between coats. White washing or painting in tanks shall be performed as directed. All pipes, valves, covering for pipes, ect., below line of main deck which are now painted shall be repainted two coats of lead and oil.

Boiler seatings, underside of boilers, boiler castings, boiler fronts and ash guards shall be chipped and scaled with pneumatic tools, wire brushed and painted two coats of metallic paint selected by Chief Engineer.

SCRAPING AND VARNISHING IN CABINS:

All bright wood work on upper and lower decks shall be scraped free of all varnish and sandpapered. This cleaning process shall be carried to such a point as will entirely eliminate scratches or stains; the benches, etc. to be planed if found necessary and varnished three coats of "Valspar" varnish or equal and approved.

Each coat of spar varnish to be dry and rubbed thoroughly with pumice stone before next coat is applied and the finishing coat shall be rubbed to a dull finish.

CLEANING AND PAINTING:

All painted wood work and canvas panels shall be washed and cleaned with soda or ammonia water.

Where paint is blistered or scaled it shall be burned, scraped and sandpapered.

Engine room and Boiler Room hatches wherever the paint is blistered or scaled shall be scraper off and in other parts washed clean with soda or ammonia water.

The whole of painted surfaces shall then receive two coats of white lead and linseed oil of same color as now in use or as directed.

Canvas panels shall be stippled.

The outside surface of the boiler room hatch in upper cabin shall be cleaned as heretofore stated and painted one coat of white lead and linseed oil in similar manner as at present.

The upper part is to be stippled.

OUTSIDE SUPERSTRUCTURE PAINTING:

The outside paint of super structure shall be burnt off where blistered or loose, scraped and sandpapered smooth.

Surfaces above referred to shall then receive three coats of lead and oil paint of quality specified, after which two coats of "Valspar" varnish are to be applied as heretofore specified.

PAINTING OF CEILINGS:

The ceilings for lower deck and pilot houses shall receive one coat of white lead and linseed oil and one coat of white enamel of brand selected by Chief Engineer. The ceiling of upper deck shall receive one coat of white enamel.

PAINTING OF CANVAS COVERING:

The canvas on upper deck and over main cabin and pilot houses shall be painted two coats lead and oil.

LIFE RAFTS:

The life rafts shall be taken apart for cleaning and painting, and receive two coats lead and oil and one coat "Valspar". The present lettering shall be duplicated.

OUTSIDE STAIR TO UPPER DECK:

The new stairway to upper deck after being prepared with best mineral paste wood filler shall receive three coats of "Valspar" varnish as heretofore specified.

ZINC DADO IN TOILETS:

The dado in the two toilets shall receive one coat of white lead and oil and three coats of best white enamel paint.

FLAG POLES AND RANGE POLES:

Flag and Range Poles after being washed clean shall receive two coats of white lead and linseed oil.

NEW TOILET ROOMS, ETC.:

New Toilet Rooms and enclosure under stairway shall have all new painting and varnish work done in three coats and old work in two coats and all other new work not here specified shall be painted or varnished with three coats.

PAINTING OF FUNNEL, ETC.:

The funnel and vent hoods shall be chipped with pneumatic tools, scraped and cleaned down to bare metal, and then painted one coat of red lead and two coats of asbestos paint of regulation color.

Davits shall be chipped, scraped and cleaned in a similar manner and then receive one coat of red lead and two coats of white lead and linseed oil.

MISCELLANEOUS:

Wire Mesh in railing on upper deck shall be cleaned free of rust and then painted one coat of red lead and two coats of white lead and linseed oil.

Fire Buckets shall be repainted two coats, inside and varnish on the outside.

Folding Gates on lower deck shall be painted, two coats of white lead and linseed oil.

All benches previously painted, shelving for life preservers, dock pumps, hose racks, etc., and in general all parts previously painted, after cleaning and scraping and sandpapering where necessary and as directed shall receive two coats of white lead and linseed oil.

Color in all cases shall be similar to existing work, unless otherwise directed.

LETTERING:

All lettering where painted shall be done over and where gilded shall be regilded with gold leaf. Mahogany sign boards on pilot houses shall have letters gilded with gold leaf.

PAINTING OF RADIATORS, ETC.

All radiators, pipe coils, steam pipes, plumbing pipes, wire guards, etc., previously bronzed shall receive coat of aluminum bronze paint of best approved brand. Coat of best approved brand.

Door cracks shall receive one good coat of best approved gold bronze paint. In general the entire ferryboat shall be repainted and revarnished equal to new and any part of the boat now painted, grained or varnished and not mentioned in this specification shall be repainted or varnished.

QUALITY OF MATERIALS, ETC.

LEADS AND OILS:

The white lead must be of best quality, finely ground in pure well settled raw linseed oil, of maximum whiteness, work freely under the brush, and not be crystalline in structure or deficient in density or capacity, and must not contain more than .05% of moisture, and be free from traces of acetate of lead; dry pigment must contain at least 98% of hydrate carbonate of lead. Its working under the brush body and covering qualities to be determined by practical test.

The raw linseed oil must be absolutely pure, well settled, of best quality; it must be perfectly clear and not show a loss of over 2% when heated to 212° F. or show any deposit of foots after being heated to that temperature. The specific gravity must be between 0.932 and 0.937 at 60° F.

No second coat of paint shall be applied until twenty-four (24) hours after application of the previous coat.

SPAR VARNISH:

The spar varnish shall be "Valspar". Contractor must submit sample of spar varnish in unopened can for approval. Only the highest grade of spar varnish will be accepted. No second coat of varnish shall be applied until 48 hours after the application of the previous coat. All varnished woodwork shall be rubbed down with 00 sandpaper between coats, and after the last coat, rubbed to a smoothe dull finish with pumice stone and oil.

MACHINE REPAIRS

REPAIRS TO MAIN ENGINE H.P.

Two new piston rings and two spare rings.

Guide planed. Guide shoe and cap planed, remetalled and refitted.

Refit and adjust thrust shoes.

New cross head brasses and true up pins.

Remetal crank pin brasses.

Overhaul H. P. Piston packing, Katzenstein type and renew any broken parts.

Line up H. P. Engine, put same in good condition.

Cylinder to be examined for shoulders.

Install 12 Follower bolts.

Straighten up iron stringers for raising cylinder covers of main engine.

H. P. VALVE, MAIN ENGINE:

Reseat and grind in Throttle valve. Two new collars for H. P. Piston valve.

Overall metallic packing, Katzenstein's type.

Draw file guide oars.

Adjust valve leads.

Scrape pit and adjust Stedamint brasses.

Link, block and fork end brasses and turn pins.

Remetal eccentric straps and refit same.

Line up and put entire valve mechanism in good working condition.

REPAIRS TO L.P. MAIN ENGINE:

Two new piston kings.

Guide planed. Guide shoe and cap planed, remetalled, and refitted.

Refit and adjust thrust shoes.

New crosshead brasses and pins turned.

Remetal crank pin brasses.

Overhaul L. P. Piston packing, Katzenstein type, and renew any broken parts.

Cylinder examined for shoulders.

Line up L. P. and put same in good condition.

REPAIRS TO L. P. VALVE MAIN ENGINE:

New valve stern.

New Metal packing for new rod, standard type, Katzenstein's.

Draw file guide bars.

Scrape fit and adjust Stedamint brasses.

Link, block and fork end brasses and turn pins.

Remetal eccentric brasses and refit same.

Adjust valve for leads.

One new set Gibbs.

Two new piston kings, balance piston.

Line up and put entire valve mechanism in good working condition.

REPAIRS TO CRANK SHAFT AND LINE SHAFTING:

Main engine crank shaft to be lifted, crank pins and main bearings trued in lathe and shaft refitted.

Scrape and fit bottom brasses. Scrape and fit top brasses; also remetal main bearings with Parson's white brass and refit.

Line shafting to be disconnected and lined up to crankshaft and all spring bearings scraped and fitted. Both stern bearings refilled.

Propellor shafts removed to shop and tested for trueness.

Three (3) brass parting pieces, main bearings to be fitted.

Thrust shaft to be examined and refitted.

MAIN CONDENSER:

Condenser entirely retubed and repacked with corset lace.

Renew all corroded or defective packing nuts.

Scale and cement wash both heads. Clean out condenser inside.

New Copper discharge pipes, 6" diameter. One from circulating engine and the other from Condenser.

Renew pipe from air pump under floor between both flanges.

Copper pipe about 3" diameter, 4 feet long.

REPAIRS TO CIRCULATING ENGINE:

Two new piston rings.

Two new crank pin brasses.

Overhaul and refit metal packing piston rod.

Scale and cement wash both Impellor heads.

Scale and fit slide valve and seat.

Connecting rod made butt end for new brasses instead of crown end now in use.

REPAIR TO AIR PUMP:

Slide valve and seat planed and fitted.

Metal packing overhauled in piston rod.

Scrape, fit and adjust all pins and brasses on both ends of beam and all valve and piston mechanism.

Repack water pistons with hemp packing.

SANITARY PUMP:

Two new piston kings.

Renew all piping from sanitary pump to toilets.

Install new Syphon for main engine.

Crank pit.

FRESH WATER PUMP:

Two new piston kings.

Valves and seats scraped and fitted.

REVERSING ENGINE:

Two new cross heads and piston rods and two new cushion springs.

Rebush and fit all pins and furnish new piston valve, one new piston valve. Two new cross heads and piston rods. Two new cushion springs. Rebush all pins.

REPAIR TO STEERING ENGINES:

Scrape, fit and adjust cross head and crank pin brasses and turn pins.

Overhaul metal packing in piston and valve rods. Also controlling valve rods.

Line up crank shaft.

Install steel wire cable instead of messenger chains in present use for changing from steam to hand gear.

Furnish four new adjustment springs on steering rods.

REPAIR DYNAMO:

Remetal both connecting rods, both ends.

Line up shaft and adjust main bearings.

One new valve for throttle.

Refast crank shaft and motor shaft.

WHISTLE:

Repair whistle.

REPAIR TO RUDDERS:

Both rudder stocks to be removed to shop and trued up in lathe and have stuffing boxes repacked.

Engine room rudder to be put back to former position or packing box raised up to do away with washer under riding collar or make such change so as to hold packing.

All rudder pintles to be brushed and refitted complete.

REPAIR TO VALVES, ETC.:

Overboard discharbe Valve from fire pump researed and ground in. Two new outboard discharge valves to atmosphere.

Main engine throttle valve reseated and ground in.

Seacocks reseated and ground in.

Boiler feed valve in Engine Room re-seated and ground in.

New valve and spring for Relief Valve on fire line in Engine Room to be seated and ground in.

Change surface and bottom blow-off pipes from present place inboard on side of vessel to place below water line.

Flange opening and install plug valve at skin for change on side of vessel inboard.

Two (2) new outboard auxiliary exhaust valves; Globe pattern.

Four (4) new drain valves--Reversion engine cylinder.

Four (4) new valves and nipples for steam gauges on top of boilers.

REPAIR TO ELECTRIC WIRING AND BELL WIRING:

Renew all defective wiring and renew all defective sockets, etc., Bell wiring to be entirely overhauled and present system changed to run wiring inside and have all bell pulls independent of each other.

Install new Electric wiring along walls where cabins, toilets etc. have been removed if required and furnish new fixtures of same pattern as the ones in main deck and space same as the present ones.

HEATING SYSTEM:

Renew all defective nipples and piping through decks and all defective valves throughout entire heating system where required.

Move old heating pipes under removed benches to new location under new seats.

FIRE PUMPS:

Overhaul both deck fire pumps.

Install new funnel top on drain pipe of injector.

REPAIR TO BOILERS:

Eight (8) corner door linings or check pieces.

Reseat and grind in main stop valves and auxillary stick valves and surface blow off valves and bottom. Blow off valves, also stop checks and feed check. Valves on main feed line, both borders.

Renew all joints on valve bonnets, both boilers.

Make new joints on main steam pipe next to main stop valves, both boilers.

Recalibrate steam gauges.

Both boilers to be inspected by U. S. Local Inspectors.

Both boilers scaled and cleaned out.

Four angle valves for gauge glasses.

Both safety valves ground in and two new springs for same valves.

Hand holes in backs of boilers reinforced and two new plates fitted.

Drain plugs on bottoms of both boilers removed and holes patched and welded.

All seams and rivets on both boilers were leaking, caulked and welded where necessary.

New balbes and castings for main and auxillary check feed lines on both boilers.

All joints on auxillary feed lines renewed with Tauril packing or equal.

Six new gauge Cocks.

Six floor plates.

Three lazy bars.

One set fire tools.

Renew tank tops under boilers.

STEAM ENGINE DRIVEN GENERATING SET:

This generating set to be of G. E. Manufacture or equal and shall comply with the following requirements:

CYLINDER:

The steam parts shall be short, direct, thus reducing the steam clearance, and shall be of ample area to allow for the free flow for the full amount of steam necessary to operate at guaranteed overload capacity.

The valve chest shall be reamed to insure a perfectly round and straight bore.

VALVE:

The valve shall be of the piston type, shall be accurately ground to the proper diameter and fitted to the valve chamber.

GOVERNOR AND VALVE GEAR:

The Governor shall be of the inertion type with automatic variable cut-off. It shall be mounted on an eccentric pin pressed in the crank shaft arm and all moving parts shall be entirely enclosed in the column. The Governor movement shall be transmitted to the piston valve by an eccentric rod, and valve link in direct alighment with the valve chest, without rocker arm or off-set valve mechanism. The governor shall control the speed of the engine so that the maximum variation between no-load and full-load shall not exceed 1-1/2%.

PISTON ROD AND CROSSHEAD:

The piston rod after being turned shall be accurately ground to gauge. The cross head shall be assembled with the piston rod and mounted on centers for making finishing cut of the crosshead shoes, thus insuring perfect alighment of the piston and crosshead with the cylinder and crosshead guides.

MAIN BEARINGS:

Main bearings shall be cylindrical cast iron shells in halves, Babbitt lined and fitted with liners. These bearings shall be so designed that they may be removed from the housings without the necessity of disconnecting or removing the crank shaft.

COLUMN:

All reciprocating parts, including the automatic governor and valve mechanism, shall be entirely enclosed in the column. The column shall have large doors to provide easy access to the reciprocating mechanism, and all doors and covers shall be fitted oil tight.

LUBRICATION:

An oil pump mounted in the oil reservoir and positively driven direct from the tank shaft by an eccentric shall supply oil under pressure for the main bearings, crank pin, wrist pin, governor bearing and eccentric, and crosshead guides.

A suitable strainer shall insure clean oil to the inlet of the pump and a pressure of approximately 10 lbs. shall be controlled, by a small relief valve in the oil system.

Oil piping shall be simple and direct, the connections to the main bearings being such that it will not be necessary to disconnect piping to remove bearing shalls.

A small gauge to indicate the oil pressure shall be mounted on the outside of the column.

GENERATOR

HEATING:

The rise in the temperature by thermometer degrees C. shall not exceed the following:

	FULL LOAD CONTINUOUSLY	125% LOAD TWO HOURS.
ARMATURE	40	55
FIELD	40	55
COMMUTATOR	45	55

The above temperature rises are based on a room temperature of 25° C. and will be corrected according to standards of A. I. E. E.

The tests for heating shall be made with full-load continued until the temperatures become constant: The overload temperatures being based on taking the overload run immediately following the full load run.

HIGH POTENTIAL TEST:

High potential test between coils and frame of the stationary and revolving members shall be made with 1500 volts A. C. for one minute after the parts have been assembled.

VOLTAGE REGULATION:

The maximum variation from a straight line voltage curve drawn between no-load volts and full-load volts shall not exceed 3%.

WINDINGS:

All windings shall be oil and moisture resisting.

The field coils shall be impregnated by the vacuum process.

The completed armature shall be soaked in a moisture repelling varnish and afterwards dipped in an oil proofing varnish.

NON-CORROSIVE PARTS:

The brushholders shall be made on non-corrosive material and all bolts etc. shall be sherardized.

The Generating set shall be placed on a suitable foundation made of angle irons connected to the hull construction, opposite side of the Engine room to the present dynamo.

Wire connection shall be to separate switch to instrument, and buss bars of present switch board running in galvanized conduits.

Dynamo exhaust to be arranged to run condensing or non-condensing.

Non-condensing exhaust line to be connected to main condensor and non-condensing connection to be made to present high pressure exhaust. All lines to be suitably valved.

Copper pipes to be used for main stream lines to dynamo and galvanized iron for exhaust lines.

APPENDIX D

Specification for all Labor and Materials Required for Docking, Scaling, Painting, Alterations and Machine Repairs on the Steel Hull Ferryboat "Ellis Island," May 15, 1937.

SPECIFICATION

FOR ALL LABOR AND MATERIALS REQUIRED FOR DOCKING, SCALING, PAINTING, ALTERATIONS AND MACHINE REPAIRS ON THE STEEL HULL FERRYBOAT "ELLIS ISLAND"

of the

U. S. DEPARTMENT OF LABOR
Immigration and Naturalization Service
Ellis Island, New York

The Date of this Specification Is
MAY 15 1937

File No. 98533/2

SPECIFICATIONS

FOR ALL LABOR AND MATERIALS REQUIRED FOR DOCKING, SCALING, PAINTING, ALTERATIONS, AND MACHINE REPAIRS ON STEEL HULL FERRYBOAT "ELLIS ISLAND" OF THE U. S. IMMIGRATION AND NATURALIZATION SERVICE, ELLIS ISLAND, N.Y.

CHARACTER OF WORK:

It is the intent of this specification to provide for docking, scaling, cleaning, painting, alterations, machine and hull repairs, on the ferryboat "Ellis Island," the whole to form a complete job as hereinafter specified.

The vessel is of the following dimensions:

Length over all.................	160'
Length over stern posts..........	154'
Beam of hull at deck............	37'
Beam over guards................	45'
Depth at center of top of beam...	15'

SCOPE OF WORK:

Vessel shall be docked and hauled out and, while on dock, shall at all times be properly and substantially blocked, chocked and shored. From the time the vessel is delivered and secured at site of contractor's dock, it will be at the contractor's risk until work specified is complete and vessel relaunched or returned to water and turned over and accepted by the District Commissioner of Immigration and Naturalization, or his duly designated representative.

OUTSIDE CLEANING AND SCALING:

After vessel is docked or hauled out, the entire outside of hull, including rudders, stern castings, plating of underside of deck and guards and both ends, guard pockets and guard braces shall be washed, thoroughly scaled and scraped, after which all metal surfaces are to be wire-brushed, washed and cleaned free of all rust and corrosion down to bare metal. Special attention shall be paid to scaling and scraping in vicinity of water line. All plates in any way pitted shall be cleaned bright, and depressions filled with cement so as to bring cavities flush with normal painted surrounding surfaces. All strainers shall be scraped and cleaned as heretofore specified. Both in scaling and in cleaning and in painting bottom and sides of vessel, provision shall be made to take out or change the position of shore braces or blocks. No paint shall be applied to outside of hull until scaling, scraping, wire-brushing, washing, and all cleaning work has been inspected by the Chief Marine Engineer who shall hereinafter be designated as the Engineer.

CAULKING:

All leaky butt-straps, joints, seams or rivets that may require caulking shall be carefully caulked in approved manner, as directed, tested and made tight. Contractor shall be paid at unit rates stipulated in his accepted proposal a price per linear foot for any caulking directed by the Engineer that may prove to be required for hull plates, butt-straps, joints, rivets or seams. Contractor will also be paid at unit rates stipulated in his accepted proposal for each rivet ordered caulked, each rivet welded, and each new rivet that may be ordered. Contractor will also be paid the unit rate stipulated in his accepted proposal for each linear foot of butt-strap, hull seam or joint, that may be ordered welded.

Renew zinc slabs on rudders and stern-posts on both ends of vessel and fasten zinc slabs with screws of non-corrosive composition.

Machine and true-up two rudder stocks.

Renew cement covering on bolts of rudder palms on both rudders.

Furnish and install new strainer for pump suctions on hull.

Remove all strainers for sea suctions (6) and clean out sea chests of same; replace all strainers.

Weld up both rudder pintles, file and fit both pintles for rudder shoe bushings.

Reseat, grind-in valves, and renew joints on six sea suction valves.

Re-wood both stern bearings of tail-shafts outboard; material lignumvitae.

Renew flax packing in both rudder stocks.

Renew flax packing in both stern bearings of tail-shafts inboard.

REPAIR TO GUARDS:

Remove all defective wearing planks on both sides and ends of vessel and replace same with new wearing planks, material white oak. New planks shall be butted and fitted, ends plugged, and securely spiked to wrapper. All spike heads shall be plugged with white oak plugs. Where wearing planks are splintered or rough, plane and smooth same.

Remove all guard wrappers where defective, cracked or broken. Renew with white oak material securely bolted to guard plates, with new bolts of same size and material. Wrappers and wearing planks shall be the same size and thickness as those replaced and all material shall be free from shakes and knots.

Remove all loose spikes in guard irons on both ends, and wearing planks on both sides of vessel; plug up holes and drive in new spikes. Care shall be taken that all spike heads shall be flush with facing irons. Refasten wrappers, wearing planks, facing irons on sides and ends of vessel where loose. Renew covering boards on both ends of vessel where defective and as directed.

The work mentioned on preceding page having been completed, guards shall receive two coats of paint; color, black.

REPAIRS TO MAIN ENGINES H/P and L/P:

Overhaul pistons of H.P. and L.P. main engines, refit steam rings, examine cylinders and true-up same.

Overhaul piston rod packing and valve stem metal packings in both main engines, renew garter and cushion springs, machine packing boxes. Renew all broken ring sections of metal packings and make all packing steam tight.

Remetal crank pin boxes for H.P. and L.P. engines. Scrape, fit and adjust same to both crank pins, as directed.

Overhaul H.P. piston valve, and L.P. slide valve, both engines, adjust same for lead and put valves in good working condition.

Draw-file link bars of valve mechanism, and fit gibbs of same. Scrape, fit and adjust link block brasses of H.P. and L.P. main valves on both engines, and plane brasses for more liners.

Scrape, fit and adjust eccentric straps for H.P. and L.P. eccentric rods to cam on crank shaft, and plane parting pieces for liners.

Scrape, fit and adjust fork and brasses on top of four eccentric rods of H.P. and L.P. valve mechanism, and plane brasses for more liners.

Plane guide blocks, caps and guides; fit and adjust same on H.P. and L.P. engines.

Machine and true-up cross-head pins on both H.P. and L.P. main engines. Scrape, fit and adjust cross-head brasses of L.P. main engine.

Raise crankshaft, scrape and fit brasses and gauge same.

Line up crankshaft and main line shaft. Furnish and fit new pins on all connections of reversing engine, place same in good working condition. Remove relief valves on H.P. and L.P. cylinders and grind-in same at top and bottom, and adjust valves for pressure.

Overhaul Rochester lubricating cup.

Renew bushings in cylinder bottom and valve chests in H.P. and L.P. engines.

Re-metal spare crankpin boxes.

Furnish and fit two piston rings on L.P. balance piston of L.P. slide valve. Furnish new gibb for L.P. slide valve.

Furnish six coupling bolts and nuts for tail shafts. Material steel; size duplicated.

Renew drain pipes for H.P. and L.P. cylinders; renew all valves for same, and replace all drain pipes and valves with material brass, size 3/4".

Reseat and grind-in by-pass valve to L.P. steam chest.

Reseat and grind-in throttle valve of main engines and renew nut on bottom of valve stem and repack valve stem.

Furnish new pin for top of valve stem.

Rebore bracket for throttle valve, install new rod for same; rebush bell cranks and furnish new pin for bell crank.

Furnish and fit new pin for spare throttle.

341

Valve seem and fit new nut for valve stem.

Rebush lever for reversing gear and renew pins in link of reversing gear.

Above work having been completed and both engines line up and adjustments properly made, the main engines and auxiliaries shall be subjected to dock trail for one hour; all further adjustments required shall be completed before vessel leaves shipyard.

REPAIRS TO CIRCULATING ENGINE:

Repack both ends of impeller shells with flax packing and renew lignumvitae bearings in both ends of same. Disconnect impeller shells shall receive two coats cement wash. Re-metal guide slipper.

Overhaul piston rod and valve stem metal packing, renew broken sections of same and repack piston rod and valve stem and make steam tight. Plane slide valve and seat. Renew bushing in valve stem.

Line-up impeller shaft with crank-shaft and put circulating engine in good working condition. Plane crank-pin and cross-head brasses; scrape and fit same. Furnish and install laminated liners for crank-pin, cross-head, eccentric and valve connection parts.

Overhaul non-return valve on side of vessel from circulating engine. Furnish and fit new pin for cross-head.

REPAIR TO STEERING ENGINES:

Scrape and fit crank-pins and cross-heads, both steering engines. Machine and true-up piston and valve rods of both steering engines. Furnish and install two controlling valve rods; renew metal packings of piston, valve stems and controlling valve stems on both engines after replacement of new metal packing. All rods in both steering engines shall receive two turns of H.P. steam packing before replacing glands, and made steam tight. Adjust worm gears, rods, and drums on both engines; overhaul and line-up drums for steering cables, both engines; overhaul gears, wheels and bearings in standards in both pilot houses and interchanging wheels and chain of same, and put all mechanism of steering machinery in reliable and safe condition.

Renew pins in all gag pins.

Renew two deck castings for gag pins.

Furnish and install two controlling valves for both engines. Furnish and install new worm gears on crankshaft, "E 1." steering engine.

Furnish and install boxes for chains on both sides of quadrants, material wood.

Furnish and fit two main bearing caps.

On completion of all work on both steering engines, they shall be tested and tried out by hand and steam.

Remetal crankshaft bearings, both engines (4).

Furnish and install four (4) new keys for both rudder stocks.

Furnish two (2) cables for steering engines, size and material to be duplicated with new.

REPAIR TO DYMANOS AND LIGHTING PLANT:

Overhaul piston and valve rod metal packings and refit same; true-up commutator and smooth up same; overhaul armature and fields and test out same; renew all defective insulation and cover all bare parts of armature and fields of G.E. dynamo. Line-up crank and motor shaft.

Renew all defective wiring, sockets, brackets and guards and refasten all loose connections, after which entire system shall be tested and placed in service.

Furnish and install new piston rod.

Furnish and install one set new brushes for commutator.

Overhaul and test out meters and switchboard.

Furnish and install throttle valve; material, type, size duplicated.

Scrape, fit, cross-head and crank-pin brasses and adjust same.

REPAIR TO BELL SIGNAL SYSTEM:

Renew all bell wiring, indicator, whistle wiring, springs, pulleys and pins of same, as directed, on all decks, pilot houses and engine room. All bell pulls, speaking tubes and whistles shall then be tested and tried out. Gauge of wires shall be as directed and approved. Entire signal system of vessel shall be put in safe and reliable condition - all chains shall be renewed. Overhaul and adjust "Rush" indicators in both pilot houses for ahead and astern direction, and make both indicators safe and reliable in both directions.

Line-up pulley underside of main deck for "Rush" indicator.

Overhaul telegraph system from pilot to engine; renew springs of same and put system in safe, reliable condition.

Furnish six springs for bells of telegraph system in pilot houses and in engine room. Renew all pulleys, spring and wiring for whistle from smokestack to both Pilot Houses.

REPAIR TO AIR PUMP AND CONDENSER:

Overhaul steam piston; plane and reseat steam valve. Renew metal packing in piston rod and repack same. Furnish two new steam valves for main steam line, material brass, size 3/4", globe type. Renew and repack two pistons in water end of pump with flax packing of same size. Renew all defective valves, springs, studs and nuts in water cylinders of air pump, size and type to be duplicated. Reset flange on pipe from impeller to condenser. Remove both heads from condenser, clean out all tubes; test out condenser for defective tubes and packing nuts. In replacements of tubes and nuts or renewals of same, the material and size of new tubes shall be duplicated and packing for tubes shall be corset lace.

After all repairs to condenser are completed, condenser shall be tested for tightness and made ready for service.

Renew zinc plates.

Furnish and fit new pin for valve rod of air pump.

Scrape, fit, and adjust slide valve, rotary valve and seats of same.

- REPAIR TO SANITARY PUMP:

Furnish and install eight valves, seats, springs and guards, renew stud bolts in water end of pump. Size, type, and material duplicated.

Furnish one set of springs(8).

Renew bushing in water end of pump for piston rods.

Furnish and install new linings in both cylinders in water end of pump. Size and material duplicated.

Furnish two piston rods; size and material duplicated.

Furnish two piston rods for fresh water pump; size and material duplicated.

New suction line on Sanitary pump - material copper - same type as now in place.

REPAIR TO FUEL OIL UNIT:

Furnish four globe valves, extra heavy, size ½", material brass. Furnish four air cones for furnaces. Scale and clean out both oil heaters and coils of same; repack both heater stuffing boxes with mechanical oil packing, size ½". Caulk up and make tight all rivets in fuel oil tank. Fuel oil tank shall be washed and cleaned; tested for leaks, and refilled with 20 tons of Bunker C fuel oil.

Pneumercator gauges and oil meter shall be overhauled, tested, and put in accurate condition. Weigh and test out all cylinders of fire equipment and put all in good condition. Furnish two valves stems for two pumps, plane valves and seats of both oil pumps and overhaul valve gear. Overhaul four Leslie reducing valves and one Leslie reducing governor, on oil unit. Furnish one oil meter for fuel oil unit.

Furnish and install two Globe valves for oil heaters, size and type duplicated.

Furnish and install (4) Globe valves for burners.

Overhaul both oil and steam pistons in both oil pumps and put same in best serviceable condition.

Scrape, fit, and adjust all valves and seats in both oil pumps.

Overhaul and recalibrate one pressure gauge on oil unit.

On completion of above work, entire oil unit shall be tested out and put in service.

REPAIR TO BOILERS:

Scale, wash, clean out both boilers internally.

Renew zinc plates in both boilers where wasted away.

Renew four fusible plugs in both boilers.

Renew brick work in four furnaces.

Furnish four flame cones for both boilers.

Furnish and fit four studbolts for blow-off valves.

Furnish twelve fire bricks for both boilers.

Remove uptakes and refit same on both boilers and make uptakes and doors of same airtight.

Reseat and grind-in surface and bottom blow-off valves on both boilers.

Remove nuts, caulk and make tight longitudinal stays in fronts of both boilers.

Reseat, and grind-in auxiliary feed check valves.

Furnish and install four Glove valves, material brass, size $\frac{1}{2}$", for steam gauges.

On completion of above work, both boilers shall be filled with hot water - temperature 120°, and made ready for inspection and hydrostatic test by U.S. Local Inspectors and put in service.

All repairs to boilers shall be completed before vessel leaves contractor's yard.

REPAIR TO SUPERSTRUCTURE:

Remove all wood sheathing and moulding where cracked and rotted away on sides and ends of superstructure, on main and cabin decks, and fronts of pilot houses. Replace same with white pine, size and thickness as that replaced, securely fastened and made tight in approved manner.

Deck rails on sides and both ends of vessel, where cracked and rotted away, shall be replaced with oak material, and all defective and cracked posts, rods, etc., shall be removed and replaced, securely fastened, and made safe.

Seats and benches on lower deck and seats and benches on cabin deck and around pilot houses shall have all cracked and damaged parts renewed; defective uprights shall be replaced with new ones and securely fastened.

Overhaul all sliding window sash of windows on lower deck, cabin deck, and both pilot houses and replace all broken glass. Renew all cracked sash and defective frames in all windows of vessel, and replace same with material of like kind. All windows shall be placed in good working condition.

Renew all defective and broken locks and springs of same in doors of superstructure. Renew all defective window fastenings in pilot houses and on main and cabin decks. Renew all worn sill and kick plates, and refasten all loose plates. All repairs to plates and hardware shall be equal to new. Renew all rivets in gates on New York end of vessel.

Overhaul four pilot house doors; all locks, and refit knobs of same. All doors shall be placed in good working condition.

Furnish and fasten new rubber treads on four stairs to pilot houses; fasten all steps of stairs, and place stairs in safe condition. Renew rubber treads on combing at each side of both pilot houses. Overhaul and clean out scuppers on cabin deck.

Overhaul and clean out all scupper pans and pipes in both pilot houses and Commissioner's room, and test out all scuppers. Overhaul rails for pilot house steps renewing all defective rails.

Renew defective woodwork around S. B. sidelight.

Furnish and install two new side signal lights; material brass, size and type duplicated.

Furnish and install boards for new side lights; material wood, size duplicated, securely fasten new lights and boards to hurricane deck on starboard and port sides of same. New wood shall receive two coats of paint, one coat varnish.

Renew flashings at bottom of both flagpoles on hurricane deck and make same water tight.

REPAIR TO MAIN DECK COVERING:

Repair all cracks and holes in a asphalt composition covering on lower or main deck and renew asphalt on ends of same. Cracks and holes shall be cut out, filled in, and smoothed up. New asphalt composition shall be able to withstand the heat without softening up; composition shall also be mixed and laid to prevent cracks.

Remove heater pipes under seats. Remove asphalt covering of main deck around engine and boiler room casing on main deck; remove all defective wood under asphalt covering; and replace same with material yellow pine of same size; caulk and make watertight on completion of above work decks covering shall be laid and made watertight same as surrounding asphalt surface.

Renew rubber covering both ends on cabin deck.

OUTSIDE HULL PAINTING:

Entire outside of hull of vessel, including guards, guard plating, guard pockets, both rudders, border plating and stern castings, shall receive three coats of paint. Draught figures to be white. Entire bottom of hull of vessel, underneath sides of guards, guard pockets and border plates of same on both sides and ends, including rudders, propeller and stern castings, shall receive two coats Red Lead and oil paint and one coat of anti-fouling paint, color red.

Before any painting is performed, surfaces shall not only be cleaned as required, but shall be thoroughly dry in order to secure proper setting of paint. Inside and outside painting shall not be performed until after all work specified and needful to be done (while vessel is on dock) had been completed.

INSIDE HULL PAINTING:

Both sides of hull and bulkheads of vessel including ceilings and bilges shall be washed and cleaned. No paint shall be scaled unless blistered or loose; damp-proofing shall be renewed where directed. Both sides of hull, pipes, stanchions and bulkheads, shall receive one coat inside gloss white, type to be selected and approved. Both sides, bulkheads and ceilings in boiler room shall receive one coat inside gloss paint, color as approved. Both end compartments of vessel, including rudder stocks and quadrants and all frame work of same shall be wire-brushed and cleaned and shall receive two coats of anti-corrosive paint. Ceilings and inside surfaces of bulkheads in both ends shall be washed and cleaned and shall receive one coat of gloss white paint. Below line of floor plating in all compartments of vessel, frame work of floor plates and supports of same, underneath sides floor plates, tank tops, pipes, propeller shafts, boiler saddles, shall be wire-brushed and cleaned and then shall receive one coat of anti-corrosive paint, color red. Inside of boiler room casing sides, ends, and top of same, ventilator, tank, and lower section of smoke stack and pipes, shall be wire-brushed, washed, and cleaned with trisodium phosphate and shall receive one coat of lead and oil paint, color duplicated.

Fuel oil tank, heaters, pipes, valves, and all parts of fuel oil heating unit, shall be wire-brushed , washed and cleaned with trisodium phosphate and shall then receive one coat of heat resisting paint; color to be selected and approved.

Care shall be taken that no paint shall be applied to "Fuel Oil" tank until after tank has been tested for leaks, and all leaks stopped.

Wash and clean with trisodium phosphate and make smooth, engine room air shaft and skylight, after which same shall receive one coat white enamel.

Wash and clean three bottom tanks; surfaces shall receive three coats cement wash.

Furnish and install equalizing valve in bulkhead between No. 1 and No. 2 bottom tanks, material brass, size 1½".

Smokestack and ventilators shall be scaled, screped, and wirebrushed, and shall receive two coats of heat resisting paint, color duplicated.

REPAIR TO CLOCKS:

Overhaul, clean and adjust for correct time four clocks: one in each pilot house, one in engine room, and one in fire-room. On completion of repair to clocks and replacement of same in their respective positions, receipt for clock repairs shall be signed by Engineer from repair company for such repairs.

REPAIRS TO TOILETS:

Overhaul two toilets on lower deck, furnish and install one new flush valve for each toilet. Flush valves shall be of same type as old valves, marine #50. Furnish and install new seats in both toilets; same shall then be tested and tried out and placed in condition equal to new.

MISCELLANEOUS ITEMS:

Renew all pipe covering where defective. Furnish and install two relief valves for urns, of approved type, material brass, size shall be duplicated. Plane slide valves and seats of same in two fire pumps, two sanitary pumps and overhaul valve gear of same.

****

Furnish and fit for floor plating 50' supporting angles, size 3" in forward end, where directed. 25' of same in fireroom, and 25' in engine room.

****

In pilot houses: Cushions to be replaced with like kind. In Commissioner's cabin: Cushions to be replaced with like kind.

****

Furnish and fit the following floor plates - two plates, 30 x 24 x 3" material steel at bulkhead in forward end of vessel. One plate 15 x 48 x 3/8" in fireroom under fuel oil tank starboard side. One plate 30 x 60 x 3/8" in fireroom back of port boiler. All plates material steel corrugated.

****

Remove all rivets and renew same in gates on both ends of vessel, remove rollers of above gates and renew same with cushioned rollers. Remove and renew defective parts of stanchions, bolts and nuts of same, replace gates and place in good working condition. Gates shall then receive (2) coats lead and oil paint; (2) coats spar varnish.

REPAIRS TO PIPES:

Repair heater pipes on main deck at boiler room casing.

Furnish and install 36' pipe for fire line in fireroom and engine room, material galvanized pipe, size 3" diam.

Furnish and install 45' pipe for filling line in engine room, material galvanized, pipe size 3" diam.

REPAIR TO STEAM GAUGES:

Overhaul and recalibrate steam gauges: two in engine room, two in fireroom, one steam gauge for G. E. dynamo, three steam gauges for heating system, one for coffee unit, and one vacuum gauge for main engines.

Overhaul four reducing valves in engine and firerooms.

****

Furnish four (4) mooring hooks, size and material to be duplicated, both ends of vessel.

Furnish and install one reduction valve for main heating system in engine room.

Furnish and install three steam valves for syphons in boiler and engine room, where directed.

Furnish strainer for bilge suction in boiler room, material lead, size and type duplicated.

CONTRACT TIME:

The bidder to whom award is made will be allowed the number of calendar days he states - not exceeding fourteen in which to perform all work as provided herein.

The Contracting Officer will duly notify the contractor the date upon which he shall begin work under the contract, and from said date the contract will be in force.

FORMAL CONTRACT:

The successful bidder will be required to execute formal contract and bond. (Std. Govt. Form of Contract No. 23). Copies attached.

AWARD NOT BINDING:

It is hereby understood and agreed by the bidder or open market or otherwise, and the contractor and his sureties shall be liable to the Government for an excess cost occasioned the Government thereby.

CONVICT LABOR:

No materials manufactured or produced by convict labor shall be used or furnished in the performance of this contract.

SUB-HEADING:

The paragraph headings printed in these specifications are inserted for convenience only and shall not be considered as limiting the application of the paragraph.

APPENDIX E

Report on Extras Required in August and September 1937
to Pass Safety Inspection.

U.S. DEPARTMENT OF LABOR
IMMIGRATION AND NATURALIZATION SERVICE
ELLIS ISLAND, NEW YORK HARBOR, N.Y.

FILE NUMBER
98533/2

August 27, 1937

Acting Commissioner of Immigration & Naturalization,
Washington, D.C.

ATTENTION OF MR.W.H.WAGNER,ASSISTANT

Reference - Contract Li13171- Central Office file 55812/712-A - repairs to ferryboat "ELLIS ISLAND"

Upon a further examination made by the Local Inspectors of the Bureau of Marine and Navigation, it has been found that certain work listed in the schedule of unit rates and other repairs needed and not covered in the contract must be done on the ferryboat "Ellis Island" now in drydock. These repairs are as follows;

Item 3- Schedule of unit rates		
1.For removing old rivets, and installing new rivets in hull, not to exceed 6,000-------------	@ $1.45 ea...	$8,700.00
Item 2- Schedule of unit rates		
2.For welding butt-straps,and hull seams - 62'	@ $6.00 linft	372.00
Item 7- Schedule of unit rates		
3.Renewal of two deck plates	@ $245. ea	490.00
Item 8- Schedule of unit rates		
4.Renewal of fourteen lower and three vertical guard stringer plates	@ $275. ea	4,675.00
5. (Not in Schedule of unit rates)		
To remove 220 lineal feet of good double guard, scale the vertical guard stringer plate in the way of this wood guard and then replace the wood guard, as required by the Local Inspectors-----------------------220 lin.ft.	@ 4.50	990.00
Item 13- Schedule of unit rates		
6.Furnish and install a new propeller wheel for the New York end of vessel-------------	@ 315.00 ea	315.00
Item 9- Schedule of unit rates		
7.Furnish and install 22 new dondenser tubes	@ 3.40 ea	74.80
(Not in Schedule of unit rates)		
8.Replace with new, 3-1/2" flanged angle sea valve now corroded, including necessary removal and replacing of piping,etc.	@ 235.00 ea	235. 00
(Not in Schedule of unit rates)		
9.Replace with new, 2" flanged angle sea valve now corroded,including necessary removal and replacing of piping,etc.	@ 59.00 ea	59.00
(Not in Schedule of unit rates)		
10.Renew circulating pump impeller shaft; also cast and machine new stuffing box, for the total sum of......		118.00

98533/2

C/O File 55812/712-A

Sheet #2---Ferryboat Ellis Island.

It is not practical to obtain competition for the extra work involved, not listed in the schedule of unit rates. No portion of this work could be foreseen or determined prior to drydocking the vessel. The amounts to be charged are not considered excessive in the opinion of Chief Marine Engineer Muster.

Accordingly, authority to cover the total expenditure of $16,028.80 is respectfully requested. The contractor informed this office by telephone that if they receive authority to proceed with this work before noon on Saturday the 28th instant, no additional time will be asked in which to do the extra recommended work.

In this instance, please issue telegraphic authority in time to reach this Station before noon, Saturday the 28th instant, (Daylight Saving Time).

Appropriation: "Immigration Stations, 1938."

Enclosed, copy of contractor's letter dated the 26th instant, informing this office of the requirements of the Bureau of Marine and Navigation.

Byron H. Uhl
BYRON H UHL
DISTRICT DIRECTOR
NEW YORK DISTRICT
SGB

MW:-Enclosure 265432

U.S. DEPARTMENT OF LABOR
IMMIGRATION AND NATURALIZATION SERVICE
ELLIS ISLAND, NEW YORK HARBOR, N.Y.

IN REPLYING PLEASE REFER TO THIS
FILE NUMBER
98533/2

August 30, 1937.

Acting Commissioner of Immigration and Naturalization,
Washington, D. C.

Att: Mr.W.H.Wagner, Ass't.

REFERENCE: Contract Li-13171, C/O file
55812/712-A - repairs to the ferryboat
"ELLIS ISLAND"

Attached hereto is letter-proposal dated the 28th instant by Brewer Dry Dock Company indicating therein further recommendations made by the Local Inspectors of the Bureau of Marine and Navigation for additional necessary repairs on the ferryboat "Ellis Island", now in drydock.

Employing the same item numbers as does the contractor, the list of repairs follow:

17.	(Not listed in Schedule of Unit Rates) Drilling 52 test holes in hull plating		$ 234.00
18.	(Not listed in Schedule of Unit Rates) Remove sea chest and furnish shaped doubler plate followed by rejointing sea chest casting to shell		461.00
19.	(Not listed in Schedule of Unit Rates)		
	Renew 7 angle shell frames - - - - - - - 147 lin.ft @ $9.50=	$1396.50	
	Renew 25 angle shell reverse frames - 324 lin.ft.@ 7.50=	2430.00	
	Renew side stringer angle - - - - - - - 32 lin.ft @ 6.75 =	216.00	
	Renew twelve connecting clips - - - - - - - - - - - - - - - - - - =	120.00	
	Remove and renew 128 sq.ft. cement - - - - - - - - @ .75 =	96.00	
	Item 19		4,258.50
20.	(Schedule of Unit Rates, Item #6) Remove 5 old hull plates and furnish new - @ $385.00		1,925.00
21.	(Schedule of Unit Rates, Item #8) Renew 6 additional lower guard plates - - @ $275.00		1,650.00
23.	Three additional lay days to accomplish above repairs - - - - - - - - - - - - - - - @ $120.00		360.00
	Total:		$8,888.50

It is not practical to obtain competition for the extra work involved and not listed in the schedule of unit rates. No portion of this work could have been forseen or determined prior to drydocking of vessel. The amounts to be charged are not considered excessive in the opinion of Chief Marine Engineer Munster.

Accordingly, authority to cover the total expenditure of $8,888.50 involved is respectfully requested - chargeable to such appropriation as may be deemed available.

It will be noted under Item 22 of contractor's letter that a request of three additional days time be allowed to accomplish these repairs. It is respectfully requested that this allowance be granted.

Please issue telegraphic authority without delay!

Byron H Uhl
BYRON H. UHL
District Director
New York District
PAB

k
Enclosure.

U.S. DEPARTMENT OF LABOR
IMMIGRATION AND NATURALIZATION SERVICE
ELLIS ISLAND, NEW YORK HARBOR, N.Y.

IN REPLYING PLEASE REFER TO THIS FILE NUMBER
98533/2

September 2, 1937

Acting Commissioner of Immigration & Naturalization,
Washington, D.C.

ATTENTION OF MR W H WAGNER, ASSISTANT

Reference - Repairs to ferryboat "Ellis Island"
L113171- C/O File No. 55812/712-A

Continuation of the examination being made by the Local Inspectors of the Bureau of Marine and Navigation, U.S. Department of Commerce, discloses that additional work must be done on the ferryboat "Ellis Island" now in drydock. Some of the work is listed in the schedule of unit rates, and other items recommended are not covered in the schedule or the contract. No portion of the work mentioned could have been foreseen or determined prior to drydocking the vessel, and it is not practical to obtain competition for the extra work involved. The amounts mentioned are not considered excessive in the opinion of Chief Marine Engineer Munster. Employing the same item numbers as does the contractor, the list of repairs needed is as follows:

24.	Item 8 of Schedule of Unit Rates Remove and replace 25 stringer plates		@ $275. ea	$6,875.00	✓
25.	NOT in Schedule of Unit Rates Renewal of guard stringer angle	608 lin ft	@ 4.50	2,736.00	✓
26.	NOT in Schedule of Unit Rates Remove and replace overhang beam connecting clips	66 ea	@ 10.00 ea	660.00	✓
27.	NOT in Schedule of Unit Rates Build up by electric welding, rudder stocks	2 ea	@ 195.00 ea	390.00	✓
28.	NOT in Schedule of Unit Rates Remove deteriorated sea chest and furnish new	1 ea	@ 365.00 ea	365.00	✓
29.	NOT in Schedule of Unit Rates Control valve on reversing engine to be trued-up and have a liner machined and fitted to same , for the total sum of			26.00	✓
	(Total of items 24 to 29,incl)...........			$11,052.00	

98533/2 - 9/2/37

REPAIRS TO FERRYBOAT "ELLIS ISLAND" - Sheet #2

Total of items 24 to 29,incl.........		$11,052.00
30. Not in Schedule of Unit Rates		
Remove and replace with new, corroded and wasted angle		
47' 5"x3"x3/8" @ $5.50 linft...........	$258.50	
47' 3"x3"x3/8" @ $4.75 linft...........	223.25	
Remove and renew deck plates (Item 7 of schedule)....8 @ $245. ea	1,960.00	
For necessary removal and renewal of asbestos insulation	350.00	
Casing plate, boiler room to be renewed (in part,where necessary)	940.00	
Heater pipes on Port and S/Board side to be removed and replaced	65.00	
While repairs are being performed under item 30, it will be necessary to shore up to properly carry upper sections at a cost of (estimated) Not to exceed..............	225.00	
Item 30, complete	$4,021.75	$ 4,021.75
31. Not in Schedule of Unit Rates		
Removal and renewal of angle around casing (engine room) 35 lin.ft. 3"x3"x3/8" @ $4.75 lin.ft.		166.25
Remove and renew 6 underneath deck plates (Item 7 of Schedule) @ $245. ea		1,470.00
Renewal of approx.18" in height of 1/4" plate around entire engine room casing, for total sum of.		714.00
While repairs are being performed under item 31, it will be necessary to shore up to properly carry upper sections (Engine room) (Estimated $210.) Not to exceed...........		210.00
		$2560.25

	(Brought forward items 24 to 31, incl).................	$17,634.00
32.	Not in Schedule of Unit Rates Remove and replace two solid round iron braces, New York end of boat....total sum of........	80.00
33.	Not in Schedule of Unit Rates Four (4) gates to be altered and cut down as directed (estimated) $160. - Not to exceed...	160.00
34.	Not in Schedule of Unit Rates To replace with new, and remove old, angle deck beams- 54 @ $195.00 each......................	10,530.00
35.	Not in Schedule of Unit Rates In connection with removal under item 34 (angle deck beams) 260 lin ft. of 4" x 14" margin planking must be removed and replaced, new where required - 260 lin ft @ $12. lin ft	3,120.00
	Remove and replace 1260 sq.ft. of house siding in the way of the removed margin planking under last item mentioned - 1260 sq.ft. @ $1.00 sq.ft......................	1,260.00
	In connection with renewal of aforementioned overhang angle deck beams, 4760 lin ft. of 3 x 4" decking must be removed and renewed, and be properly fastened and caulked - 4,760 lin ft @ 75¢	3,570.00
	1960 sq.ft. of asphalt decking must be torn up in the way of above-mentioned repairs and replaced with new 1,960 sq.ft. @ $1.10 sq.ft.	2,156.00
	In order to accomplish the work under item 35, it will be necessary to remove and replace seats and heater pipes on both Port and S/Board side (estimated $375.) Not to exceed...	375.00
	Renewal of asbestos and sheet metal insulation, boiler room outboard, both Port and S/Board side total sum of...	375.00
	Shoring required to accomplish the work mentioned under this item (Item 35) (estimated $350.) Not to exceed...	350.00

Total of item No. 35......$11,206.

Total of items 24 to 35, inclusive.......$39,610.00

The contractor requests ten (10) calendar days extension of time, in addition to the three (3) requested under item 23, mentioned in my letter of August 30, 1937.

Accordingly, authority to cover the total expenditure of $39,610. is respectfully requested without delay.

Appropriation: "Immigration Stations, 1938."

Enclosed, copy of contractor's letter dated the 1st instant, informing this office of the requirements of the Inspectors of the Bureau of Marine and Navigation.

Byron H. Uhl
BYRON H UHL
DISTRICT DIRECTOR
NEW YORK DISTRICT
BGB

MW:-Enclosure 20790

U.S. DEPARTMENT OF LABOR
IMMIGRATION AND NATURALIZATION SERVICE
ELLIS ISLAND, NEW YORK HARBOR, N.Y.

IN REPLYING PLEASE REFER TO THIS FILE NUMBER

98533/2

September 9, 1937

Commissioner of Immigration & Naturalization,
Washington, D.C.

ATTENTION OF MR W H WAGNER, ASSISTANT

Reference - Repairs to ferryboat "Ellis Island"
L113171- C/O File No. 55812/712-A

Attached hereto is copy of letter-proposal dated Sept.8,1937, from the Brewer Dry Dock Company, indicating therein further recommendations made by the Local Inspectors of the Bureau of Marine and Navigation for certain necessary repairs on the ferryboat "Ellis Island", now in their dry-dock. No portion of the work mentioned could have been foreseen or determined prior to drydocking the vessel, and it is not practical to obtain competition for the extra work involved. Some of the items recommended are not covered in the schedule of unit rates or the contract. Employing the same item numbers as does the contractor, the list of repairs needed is as follows:-

37.	Item 3 of Schedule of Unit Rates 3,682 rivets - removal of old and installing of new	@ $1.45 ea.	$5,338.90	
38.	(Not in Schedule of Unit Rates) Removing and renewing of 31 reverse frames, each 12 ft.long. 372 ft.	@ $7.50 lin ft	2,790.00	
39.	(Not in Schedule of Unit Rates) Removing and renewing 5 shell frames, ea 12 ft. 60 lin ft	@ $9.50 lin ft	570.00	570
40.	(Not in Schedule of Unit Rates) Renewing clips on above frames 29 each	@ 10.00 ea	290.00	290
41.	(Not in Schedule of Unit Rates) Removing and renewing of stringer angle - 116 lin ft.	@ 6.75 lin ft.	783.00	783
42.	(Item 11 of Schedule of Unit Rates) Replacing of cement 207 sq.ft.	@ .75¢ sq.ft.	155.25	
43.	Item 4 of Schedule of Unit Rates Welding 240 rivets in hull	@ 1.25 ea	300.00	
			$10,227.15	

98533.2
9/9/37

REPAIRS TO FERRYBOAT "ELLIS ISLAND"

Sheet #2

Total of items37 to 43,incl......$10,227.15

44. (Not in Schedule)
To replace one web plate eaten
through and corroded, together with
removal and renewal of double face
angles - - - - - - - For the total sum of 450.00

45. (Not in Schedule)
Section of gunwhale and moulding
to be renewed on life boat - total sum of (estimated). 90.00

46. (Not in Schedule)
Renewal of watertight door leading
to peak compartment - - - - total sum of (estimated) 215.00

47. (Not in Schedule)
To replace 235 lin ft. of
supporting angles @ $3.50 lin ft. 822.50

48. Item 1 of Schedule of Unit Rates
To caulk 722 ft. of shell seam
necessary to be done in connection
with renewal of shell rivets @ 60¢ lin ft. 433.20

49. Item 5 of Schedule of Unit Rates
To caulk 325 hull rivets @ 50¢ ea 162.50

50. 3---Additional lay days in addition to
those requested in office letter
of August 30th (Item 23) @ $120. per day 360.00
THREE DAYS EXTENSION OF TIME REQUESTED $12,760.35
FOR WORK under items 37 to 50, both inclusive,
in addition to the additional time asked for
in office letter of (10 days) Sept. 2, 1937,
1st paragraph of sheet #3.

51. Particular attention is invited to this paragraph referring to additional time needed. This matter requires prompt action as delay only tends to increase time required to accomplish the work specified.

Byron H. Uhl
BYRON H UHL
District Director
New York District
P23

MW:-Enclosure 63452

APPENDIX F

Card Index File - *Ellis Island*

ELLIS ISLAND: Ferry 5-2-7 4.

57,593-15	QR-Mstr: S/B-Inspn-Serv req one more aboard
57,593-15	DECKHANDS aboard PROMOTED $50 to $75 p/mo
51,831-64	COST OF MAINTAINING for yr. Rprs etc $6,529.90. Salaries $20,483.87
51,655-31	RUDDER STOCK broken: May-08. Temp ferry service vice.
53,245-66	Over-hauling - sundry Annual Repairs June-191
51,450-1	New Ferry-Boat as companion to Ellis Island NY submits estimate $125,000 July-1911

Ellis Island "Ferry"

51,831-64	Expense operation of - Statement includes cost boats in place of etc. Oct-08
51,953-226	Reversing Gear - Repairs - 9/3/8 JE Moore Co -
	Substitute for - 1-day "Gen-Putnam" pending above repairs - Sept-08
51,953-353	Propeller Wheels - Extra - From Alex-Miller Sept-08
51,953-358	Rudder broken - Oct-8-8 repairs & temp substitute for it -
51,953-360	Piston Rod - Repairs to Oct-9-8
to -360-A	Substitute for - The Herman Caswell engaged -

ELLIS ISLAND SS (9-11-09) 6.

52,590-21	REPAIRS $200 broken propeller: 9/10/9
52,590-41	PROPFLIER Wheels Spare $195 Showan 9/29/9
52,590-58	LEATHER SHOES for Manhattan Sup.Co. 10/6/9
52,386-39	ACCIDENT 8/15/08; Exp repairs; Stmbt-InspN SerV to fix responsibility 11/27/9.
52,590-105	REPAIRS to quadrant $35 Miller Bros 11/27/9.
52,736-14	REPAIRS Elec-Generator * 12/11/9
52,736-21	GAUGE GLASSES for boilers $16.14 12/20/9.
52,736-14	REPAIRS to elect generators $16.40 12/21/9.
52,237-125	ACCIDENT 2/24/09; Breaks propeller in fog; damages to NYC a/c piles at Battery
52,736-49	Semi-annual Repairs; $1250 Shewan & Sons 2/10

"Ellis Island" Ferry - 7.

52,879-41	Successor as Ferry in emergencies - Sundry hire of - "Englewood" engaged 4/9/10
53,039-35	Breakage of Wheel - Repairs $2369 for new propeller &c Col.Engrng Wks 9/16/10
53,039-37	SUCCESSOR on Ferry Service during above repairs; hire of boat from Moore Co 9/19/10
53,106-13	Nautical Instrument purchased for $50 11/5/10
53,171-16	PLATES for guard rail $24 Marine M&S Co 2/11
53,039-36	PUMP repairs $79.65 Blake Mfg Co Sept-1910
53,245-72	RUBBER MATS $72.25 Goodrich Co 6/10/11
53,366-22	PROPELLER Broken 11/10/11 - repairs $305 - hire of substitute $75;
53,386-18	COAL BARROW purchased $62 Feb-1912

Ferry Boat -

51,450	SECOND ONE for service in conjunction with present ferry "Ellis Island" -
52,879-41	Emergy Hire vice "EI" under repairs etc "Englewood" hired 4/9/10 $125 p/d -
59,304-29	Emergy Hire ss-MINNAHANOCE during repairs to "EI" July-1911
53,366-30	ss-ANNEX offered for sale to Govt for use as substitute ferry-boat; Dec-1911
53,886-5	SUBSTITUTE during repairs to EI - proposal Union Ferry Co $65 p/d Oct-1912

Ferry-Boat "Ellis Island" -

53,386-5	Sundry repairs - reports re accidents, etc.
53,386-27	LIFE PRESERVERS $70 Kahnweiler Apr-1912
53,386-28	Life Raft $125 Kahnweiler Apr-1912
52,736-B-D	SLIP for at NEW BARGE OFFICE - Mar-1913 -
53,386-27	Life Preservers $87.50 Marine Mfg Co Nov-1913
53,620-216	TWO MEN Drown a/c RAIL GIVING WAY throwing them into water - INSPR. WALDO & Howard H. Peterson - Sept-1913 -
53,775-172	FRUIT STAND priv; Jane Noonan req 4/27/14 - NY protests vs Edw. Kennedy selling fruit on
53,892-1	Sundry repairs to - supersedes 53386-5 1/4/15
53,701-38	PUMP REPAIRS for; $111.67 Blake & Knowles Steam Pimp Works - June-1914 -
54,049-5	Injector from Montgomery & Co. $104,1/19/16

Ferry-Boat ELLIS ISLAND -

54,152-66	ny re legislation before Senate Committee compelling ferryboars to comply with same restrictions that apply to other steamboats. Says if passed would require additional ferryboat 3/27/16 -
54,191-1	supporting, Ferry Bridge sank; Jan-1917 Merritt & Chapman Derrick & Wrecking Co $750 1/18/17 -
54,191-22	Repair and replace pontoon float $1125; James Tregarthen & Sons Co 6/13/17 f
54,295-GEN	National Federation of Federal Employees behl deckhands of req increase in pay 8-15-18
53,892-1	Crane - To lift ashes frm William J. Haskins to furnish @ $675. 1-20-19

Ferry-Boat ELLIS ISLAND -

54,295-GEN.	Crew of req promotions - EI fwds req 7-15-19
55,097-14	ferry bridge-EI exp to Shelbourne & Blake Construction Co for repairs to. piles, U bolt, yellow pine planking and pontoon hatch.
55,097-60	ferry bridge pontoon-EI exp to IRS S BUSHEY for re calking 12/17/21n.
54,969-25	to Jenkins Bros for certain valves to be used on & to Schutte & Hoerting for certain repairs
54,969-25	EI exp to Clinton Dry Docks Inc to bore one of the cylinders in engine of above boat.
55,174-93	EI exp to Hagy Bros for white clean cotton waste for Engineers of

Ferry Boat "Ellis Island" 2/6/23ws

153-969-25	El exp to Reilly & Guy Co for 6 pairs of galvanized strap hinges for doors of
154-959-25	exp to D.P. Winne Co for one ciol of sash cord #10 for flag yalyard on ferryboat 3/13/23ws
155-174-150	EI exp to Swan & Finch Co for lubricating oil for use of Ferryboat "Ellis IslandP & Power Plant 7/13/23ws
35-174-182	EI exp to United States Rubber Co for packing & gaskets for power plant & ferryboat EI.
55-174-207	exp Westinghouse Electric & Manuf Co for 1 connecting rod & 2 bolts for same for use on
54-969-25	exp to Safety Fire Extinguisher Co for 2 six bucket tanks 2/27/24ws
55-166-143	Schedule of trips of Ferryboat at Ellis Island

Ferryboat "Ellis Island" 3/15/24ws

65,174-220	exp to John E. Moore for ferryboat service one day $250 while Ferryboat Ellis Island is in drydock for repairs 3/15/24wx
55,174-230	exp to NY Lubricating Oil Co for engine oil to be used on Ferryboat "EI".
55,174-318	EI exp to NY Lubricating Oil Co for oils for use on Ferryboat "Ellis Island" & power plant
55,174-334	EI req auth expend sum of $52.83 for services of ss Dolphin of US Shipping Board, Emergency Fleet Corp while as Ellis Island was undergoing repairs 3/7/25ws
55,174-346	exp to NY Lubricating Oil Co for 5 barrels of Oil for use on above fy 1926

Ferry 3/15/24ws

55-174-220	EI exp to John E. Moore Co for ferryboat serviced one day $250 while Ferryboat Ellis Islandis in drydock for repairs 3/15/24ws
55-603-478	Hon Louis Crampton bhlf M.E.Fuller who dsrs perm to operate ferry at Algonac, Mich
55-606-847	Bflo rpts that NY-intario Ferries Inc has discontinued ferry service between bflo & Ft. Erie
55,637-210	Det re Algonac Islandview Ferry Co who req perm to operate ferry frm Algonac,Mich. to Port Lambton, Ont.
55-640-229	Det repts re dsr of Albert Jessup to operate a launch ferry from Sandwich Ont to Detroit.

Ferryboat "Ellis Island"

55,174-351	EI exp to H.B.W. Haff for coal for use of fy 1926
54-964-25	SEC WAR fw a ltr req infM rel to the appro= priation of $25,000.00 for the construction of a ferry boat for Governor's Island & certain correspondence relating to this ferryboat
55,596-326	EI reqs auth to solicit bids for docking, scaling, painting & repairs to ferryboat EI
55,596-326	EI exp to James Shevan & Sons Co for repairs to above ferryboat
55,599-349	EI exp to Voorhens Rubber Mfg Co for 3 50 ft lengths of rubber hose to be used on above ferry

Ferryboat Ellis Island 10-17-27b

55-505-424	Sundry File rel to construction of ferryboat "Humphrey" to replace ferryboat "Ellis Island" while undergoing repairs
55-604-90	EI exp to James Shewan & Sons Inc for $382.[?] for repairs to the ferryboat EI
65-652-456	EI reqs auth to solicit bids for engaging boat while the ferryboat Ellis Island is being repaired
55-610-569	EI recds bid of United Dry Docks, Inc. for repairing,painting & reconditioning ferryboat Ellis Island
55-697-961	Atty.Gen.reqs infm re Berwind White Coal Mining Co. (Coal Barge Eureks #66) vs. US (Ferryboat "Ellis Island") collision in fog

Ferryboat "Ellis Island" 11-13-30w

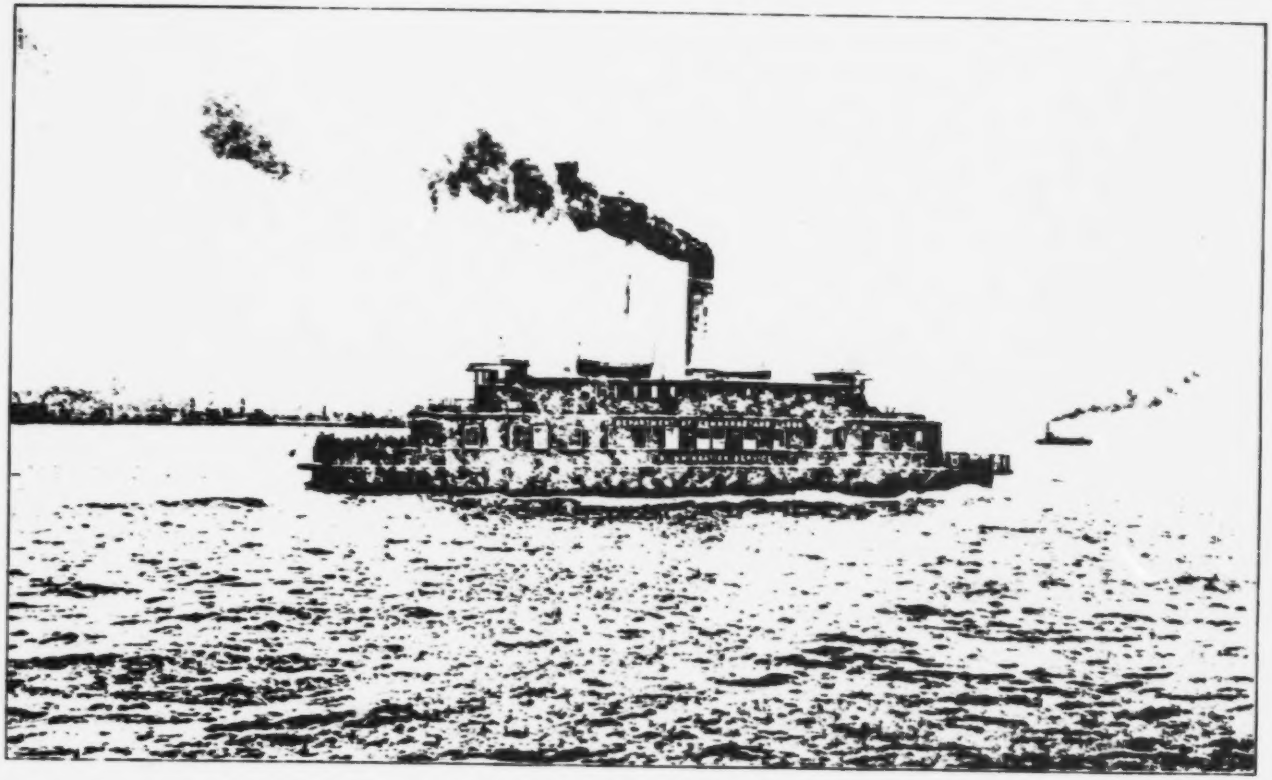
55,652-879	EI reqs auth to solicit bids for 129 life preservers for above 55912883
55,817-664	Atty GEN re libel in S.D. of NY re Eifred Pederson v US a/c personal injuries
55,812-572	EI exp one life raft
55,812-606	EI exp re repairs;including unit prices on bids on specific items such as hull plates, boiler tubes, condenser tubes,staybolts,rivets, welding etc.
55,812-857	EI reports collision between the ferryboat Ellis Island and the barge M.M. O'Brien owned by the Sinram Bros. & the Sargent Barge Line, Inc. Reqs authority to make emergency repairs
55,812-712	Gen'l file for miscellaneous repairs to

Ferry 9-1-31

55,771-720	G" re curtailing hours of inspection of ferry at Baudette, Minn; also submits working schedule of that station
55,772-776	Det query as to whose duty it is to place on board rejected aliens for return to the country from whence brought by transportation companies-- the company or the t Immigration Service.
56,778,56 56,234,143	Port Me fwes appln of Lubec Chamber of Commerc to operate a ferry between Lubec, Maine, & Campobello, N.B. from May to October
55,912-911	Substitute ferryboat to replace the "Ellis Island" while the latter is undergoing repairs.

Exp-I/S-EI Ferryboat EI 9-5-33w

55,812-415	EI exp re docking,scaling,painting,altering boiler & machine repairs to ferryboat Ellis Island - Ira. S. Bushey & Sons, Inc.
55,812-448	EI exp re two lights located at entrance of ferryrack
55,812-415	EI exp re replacement of staybolts in boilers of ferryboat EI
55,601-244	History of the Ferryboat "Ellis Island. 56026/194
55,728-709-J	Authority for the installation of an oil-burning system for the "Ellis Island" dated 6-8-32. Included in general auth. for overhaul of the vessel - converting boilers to fuel-oil.
55,812-712	Report of Collision between Ferryboat Ellis Island and barge Raven, barge "Meher Bros" and others, accuring Feb. 11, 1940.



UNITED STATES FERRYBOAT, "ELLIS ISLAND."

APPENDIX G

Cost of Repairs to *Ellis Island*

Statement of Cost of Repairs 1919-1938

Fiscal Year	Cost
1919	$ 4,542.37
1920	
1921	46,203.69
1922	39,677.67
1923	4,977.10
1924	18,833.00
1925	31,084.00
1926	13,835.05
1927	30,357.54
1928	17,656.87
1929	23,001.85
1930	30,026.45
1931	24,091.32
1932	81,422.15
1933	2,545.54
1934	41,865.71
1935	17,110.77
1936	74,742.50
1937	40,898.05
1938	55,260.85
	$598,122.48

BIBLIOGRAPHY

I. Primary Sources

Manuscript Materials

Letters Received & Sent, Ferryboat *Ellis Island*, 1906-1944, Immigration & Naturalization Service, National Archives, Record Group 85.

Letters Received & Sent, Ferryboat *Ellis Island*, 1937-1944, Immigration & Naturalization Service, Files 558-712A, 55812-712B, 55812-712C, 55812-512D, and 55812-712E.

Letters Sent, Immigration Bureau, 1903-1906, National Archives, Record Group 85.

Letters Received & Sent, Statue of Liberty (Ellis Island), National Park Service, Office of Archeology & Historic Preservation.

Public Documents

Annual Reports of the Commissioner-General of Immigration to the Secretary of Labor and Commerce, 1903-1912.

Books

Corsi, Edward, *In the Shadow of Liberty: The Chronicle of Ellis Island*, New York, 1937.

II Secondary Sources

Unpublished Reports

Pitkin, Thomas M., "A Report on Ellis Island as an Immigrant Depot, 1890-1954," National Park Service.

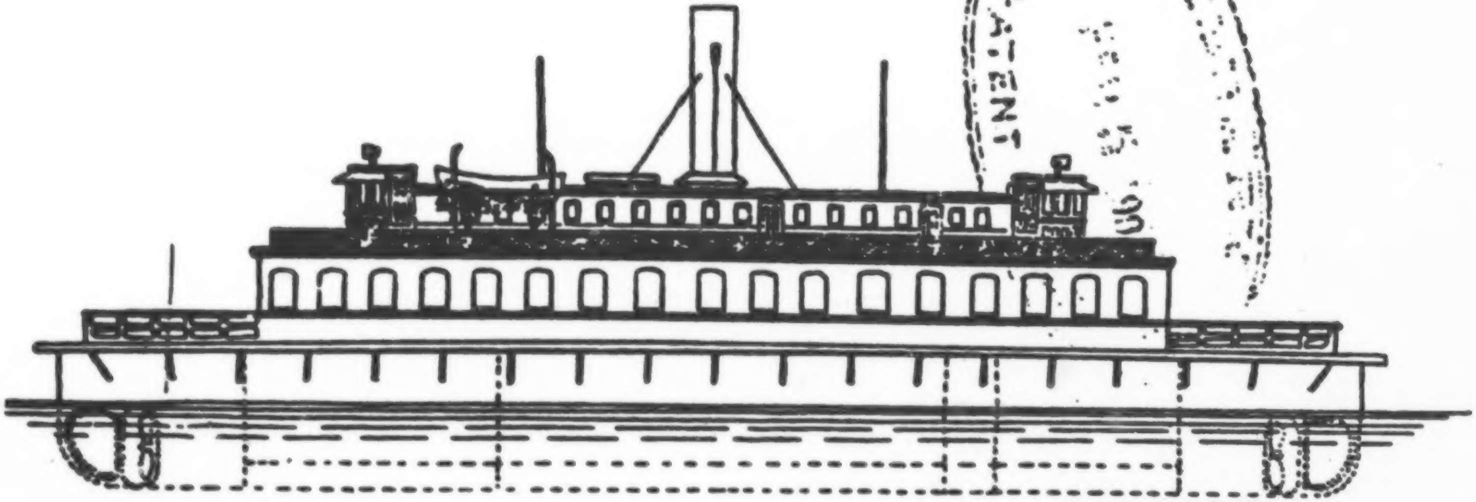
Periodicals and Newspapers

Every Evening (Wilmington, Del.)

New York Times

The Nautical Gazette

ILLUSTRATIONS



The Nautical Gazette.

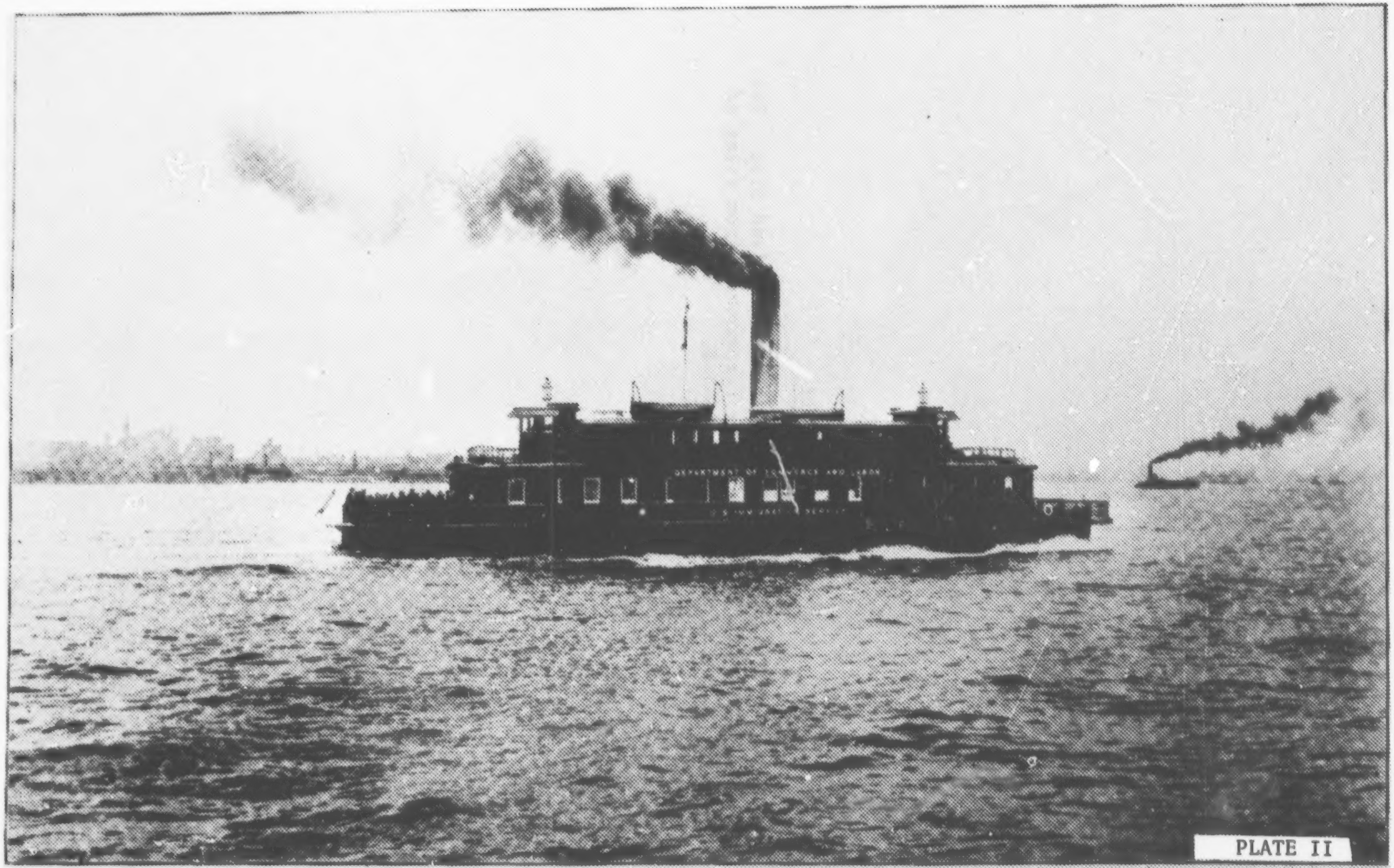
PATENT

PLATE I

PLATE II

United States Ferryboat, "Ellis Island," from *Annual Report of the Commissioner-General of Immigration to the Secretary of Commerce and Labor for the Fiscal Year Ended June 30, 1904.*

PLATE II


DEPARTMENT OF COMMERCE AND LABOR

UNITED STATES FERRYBOAT, "ELLIS ISLAND."

PLATE III

Ferry Boat *Ellis Island*, Docked in the Ellis Island Slip. The New York End of the Craft is in the Foreground, from files of National Archives, photo No. 90-G-16-A-8.

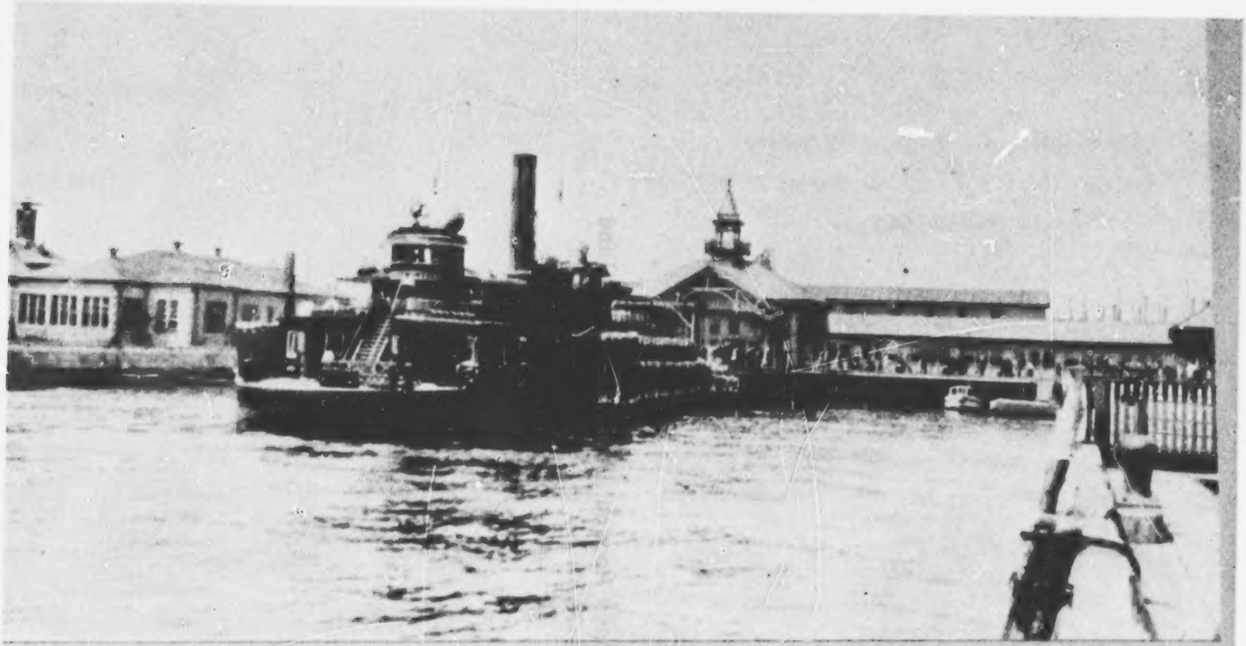


PLATE III

PLATE IV

Aerial View of Ellis Island, with Ferryboat *Ellis Island* Moored in the Ellis Island Slip, from files of National Archives, photo No. 90-G-2970.

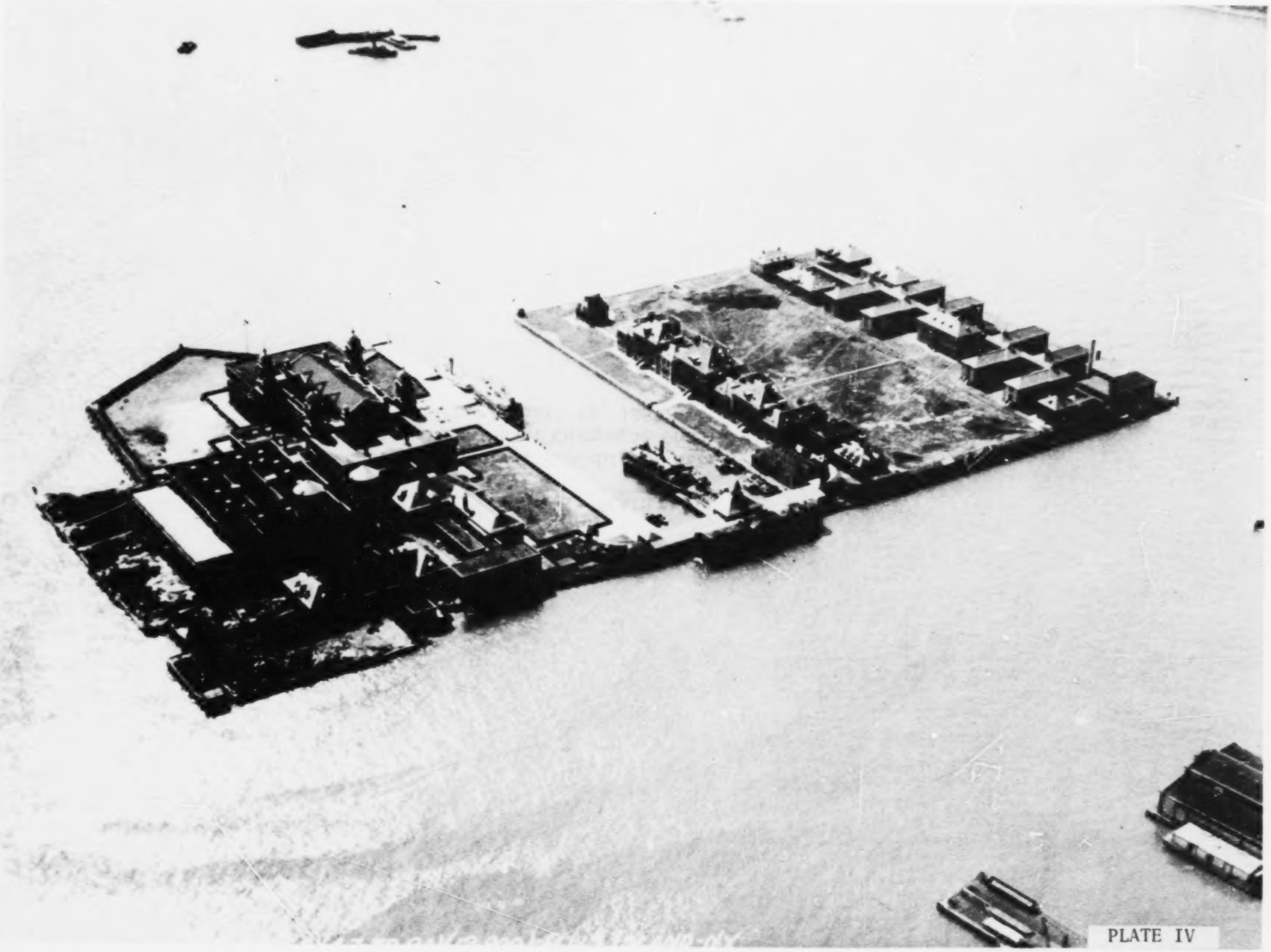
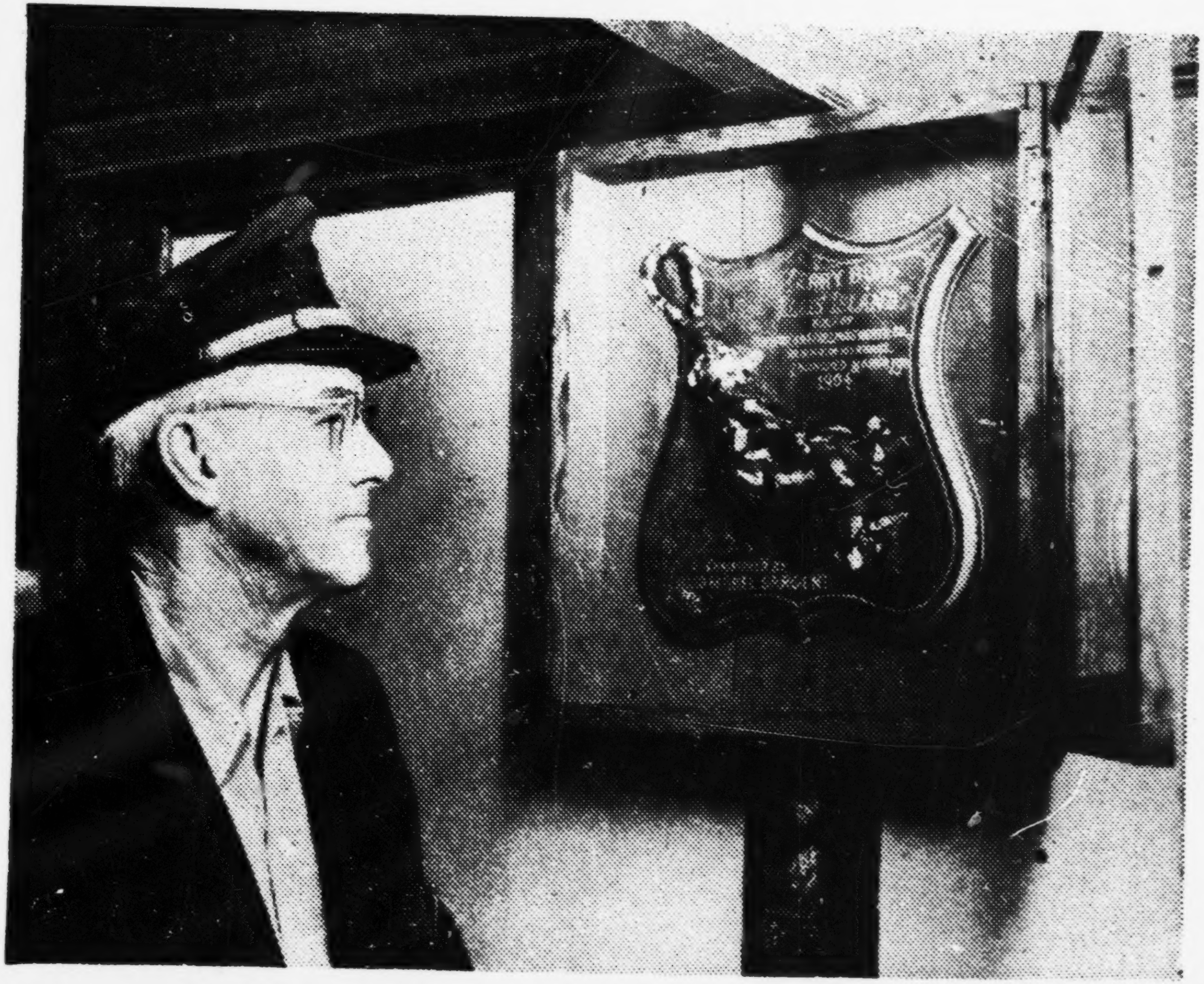


PLATE IV

PLATE V

Capt. Raymond Ives in Cabin of *Ellis Island*, with Plaque Mounting Remains of Champagne Bottle Used at Launching, *New York Times*, April 18, 1954.



The New York Times

STILL GOING STRONG: The ferryboat Ellis Island, marking her fiftieth year of operation, still carries a memento of her launching. Capt. Raymond Ives, master on duty, views the remains of the champagne bottle used at ceremony. The bottle is in a glass case.

PLATE V

PLATE VI

Pilothouse at Ellis Island End of Ferryboat, with Capt. Raymond Ives at the Wheel, *New York Times*, November 30, 1954.

The New York Times (by Meyer Liebowitz)

HISTORIC VESSEL MAKES LAST RUN: Capt. Raymond P. Ives, skipper of the Department of Justice ferryboat Ellis Island, at the wheel of the sturdy craft as she approaches the now-deserted immigration station in New York Harbor.

PLATE VI

PLATE VII

Immigrants Disembarking from the New York End of Ferryboat *Ellis Island*, circa 1920s, from *In the Shadow of Liberty*.

Photo courtesy "The News," New York.

IMMIGRANTS DISEMBARKING FROM THE FERRY WHICH HAS BROUGHT THEM FROM ELLIS ISLAND TO THE BARGE OFFICE AT THE BATTERY.

PLATE VII

PLATE VIII

Photograph of Ferryboat *Ellis Island* (Port Quarter), Docked at Ellis Island, circa 1967, courtesy Dave Kimball, NPS.

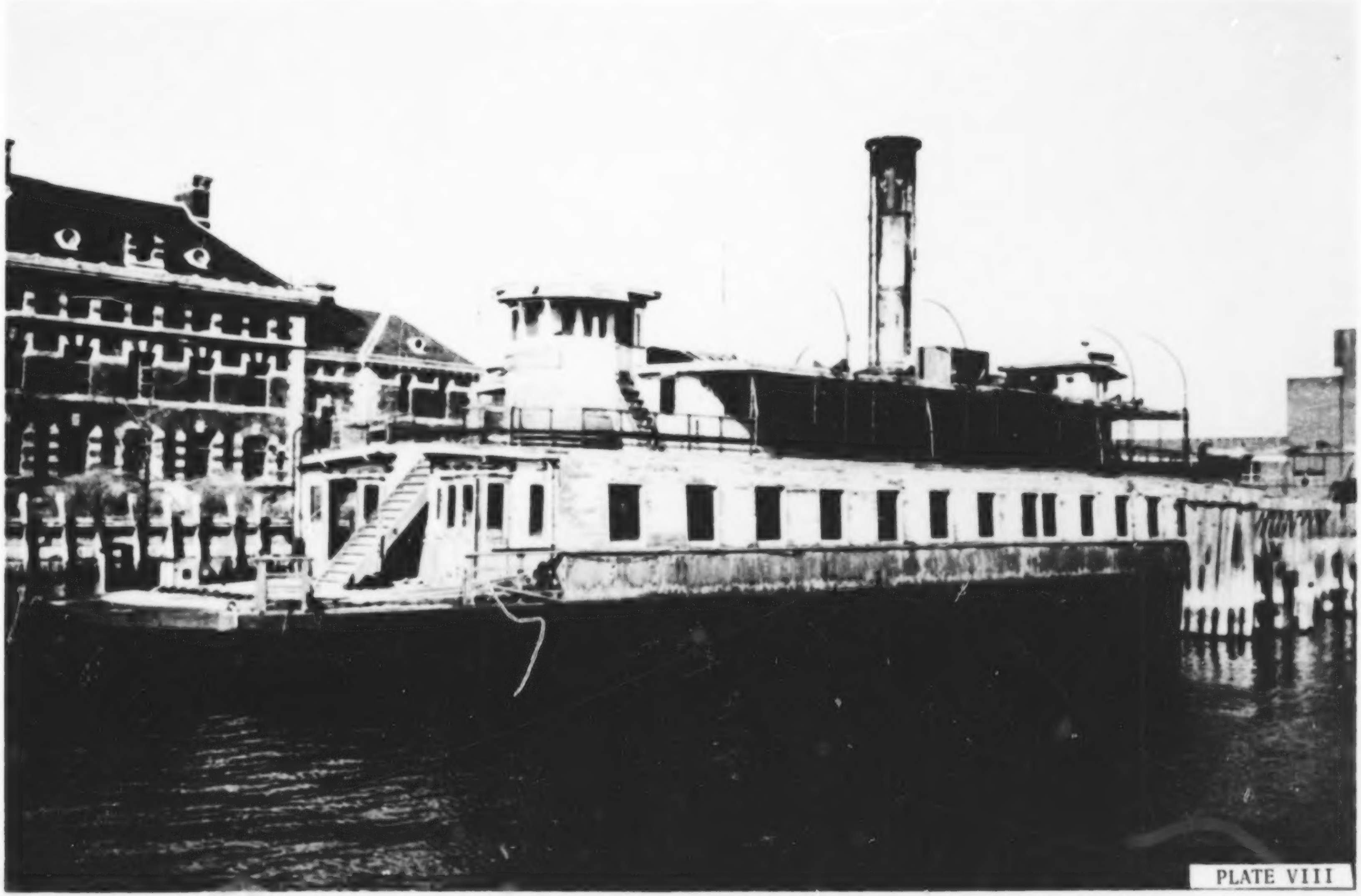


PLATE VIII

PLATE IX

Photograph of Ferryboat *Ellis Island* (Starboard Quarter), Docked in Ellis Island Slip, circa 1968, courtesy Nate Golub, NPS.

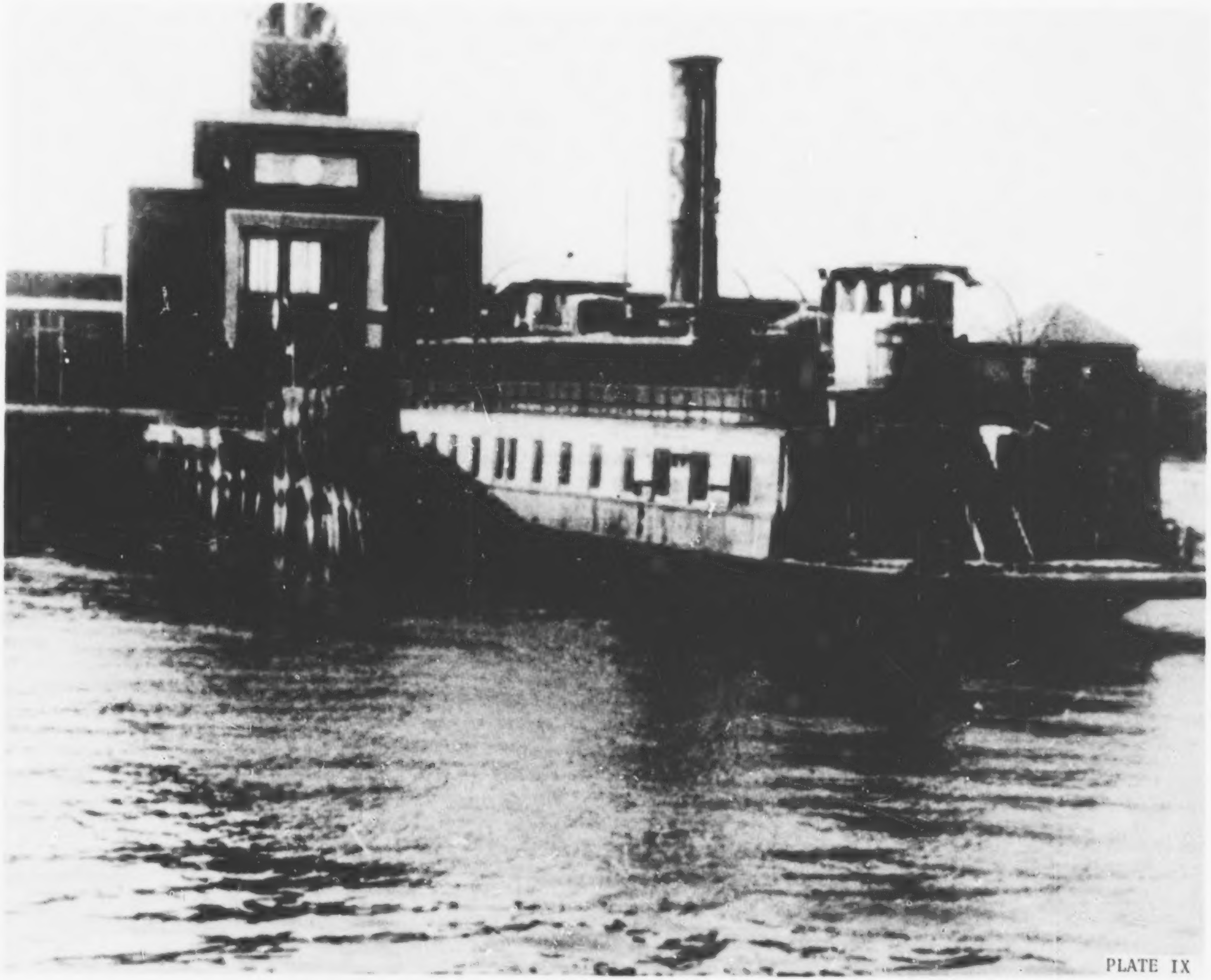


PLATE IX

PLATE X

Ferryboat *Ellis Island*, Sunk in Ellis Island Slip, List is 15° to 20° to Port, August 1968, courtesy Nate Golub, NPS.

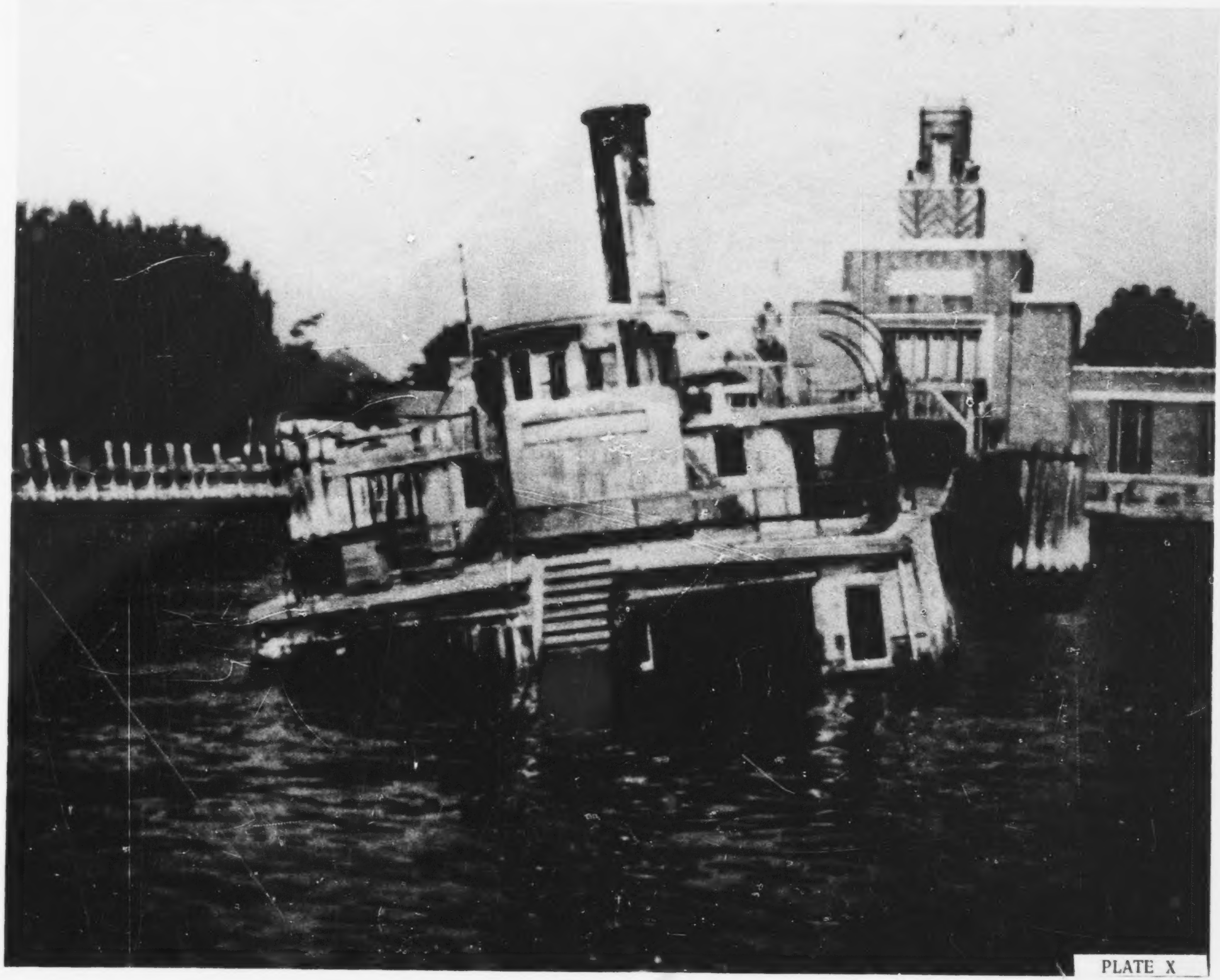


PLATE X

PLATE XI

Ferryboat *Ellis Island*, Sunk August 1968, photograph taken by Nate Golub, NPS, from Ellis Island Slip.

PLATE XI

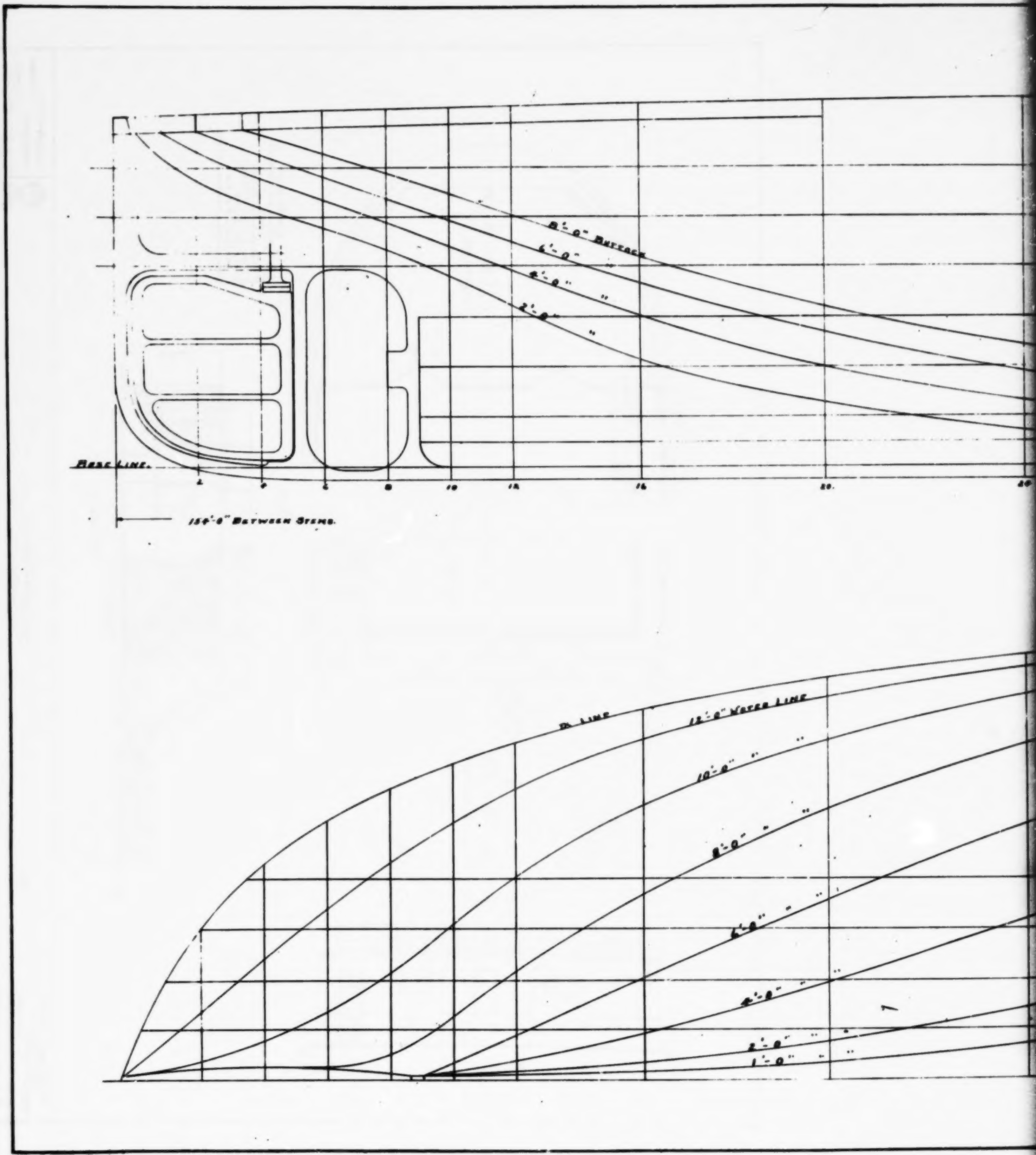
PLATE XII

Sunken Ferryboat *Ellis Island*, August 1968, photographed from Seaward Side by Nate Golub, NPS.

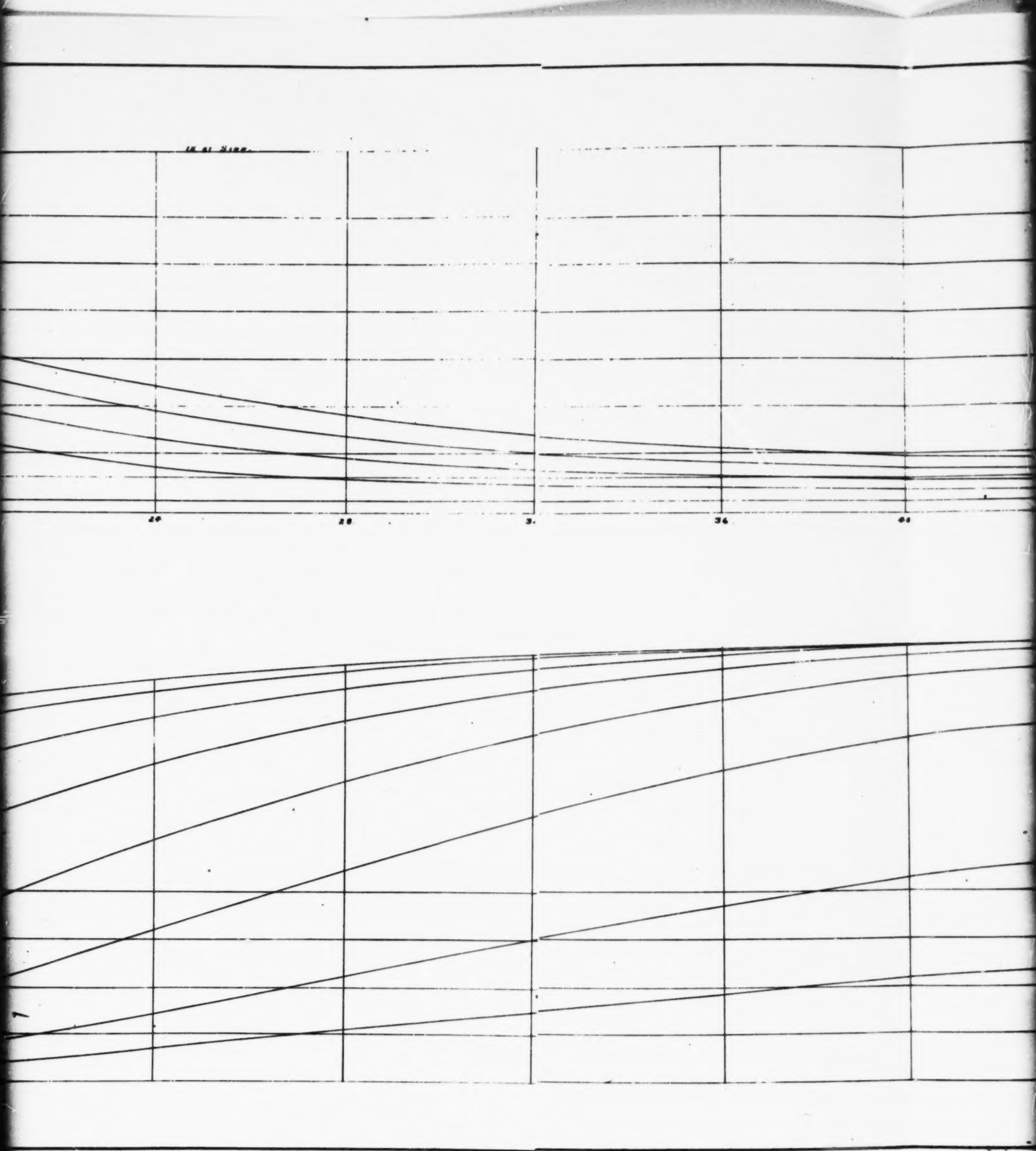
PLATE XII

PLATE XIII

Lines for *Ellis Island*, courtesy Smithsonian Institution.


8'-0" Buttock
6'-0" "
4'-0" "
2'-0" "
Base Line.
2
4
6
8
10
12
16
20
24
154'-0" Between Stems.
℄ Line
12'-0" Water Line
10'-0" " "
8'-0" " "
6'-0" " "
4'-0" " "
2'-0" " "
1'-0" " "

A


IK at Side.
24
28
3.
36
40

B

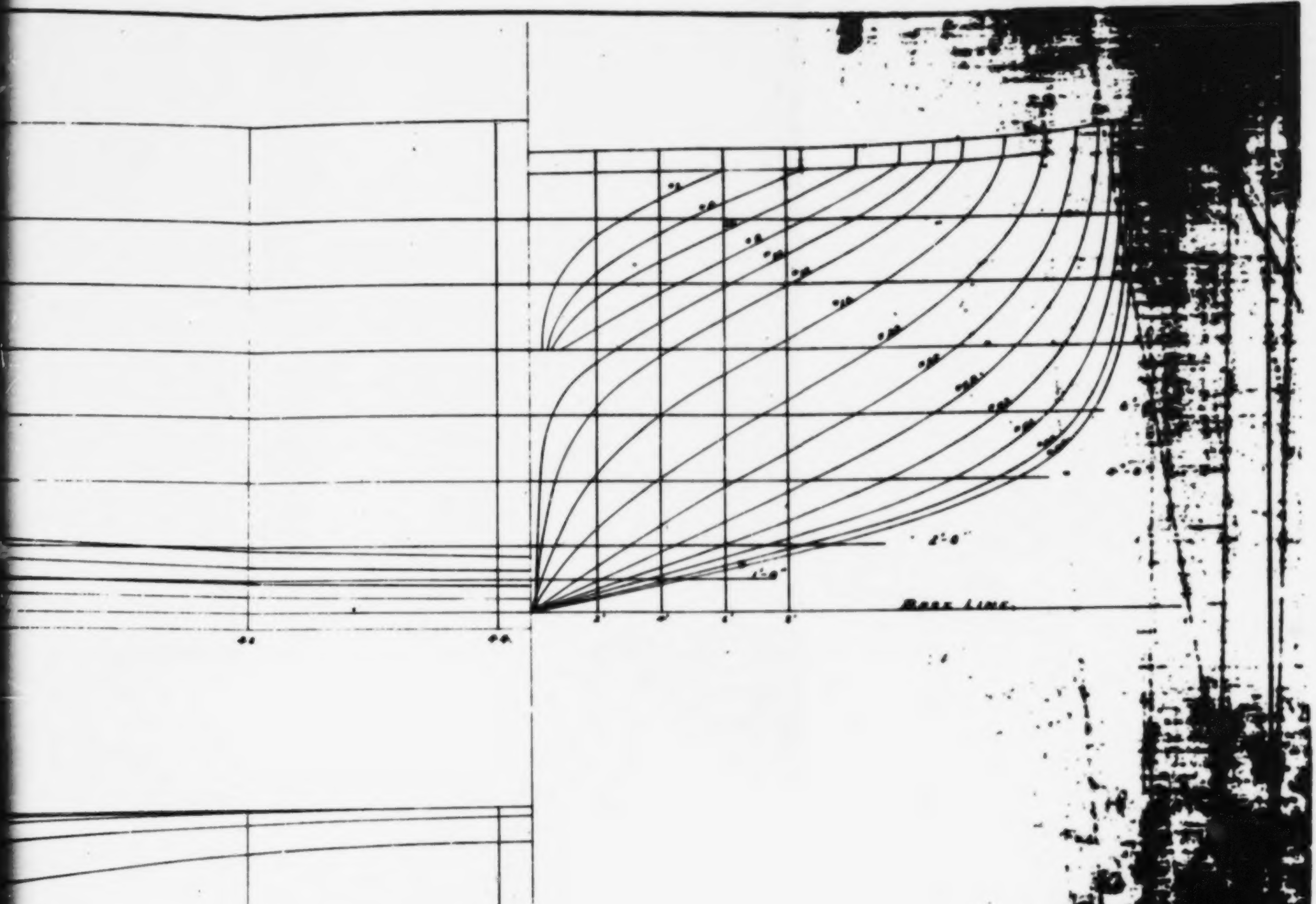

Base Line
2'-0"
Principal Dimen
Length Overall
" Between Stems
Beam Moulded
" over Guards
Depth Moulded
LINES
ELLIS ISLAN
Ellis Island Ferry
No.-203

PLATE XIII

C

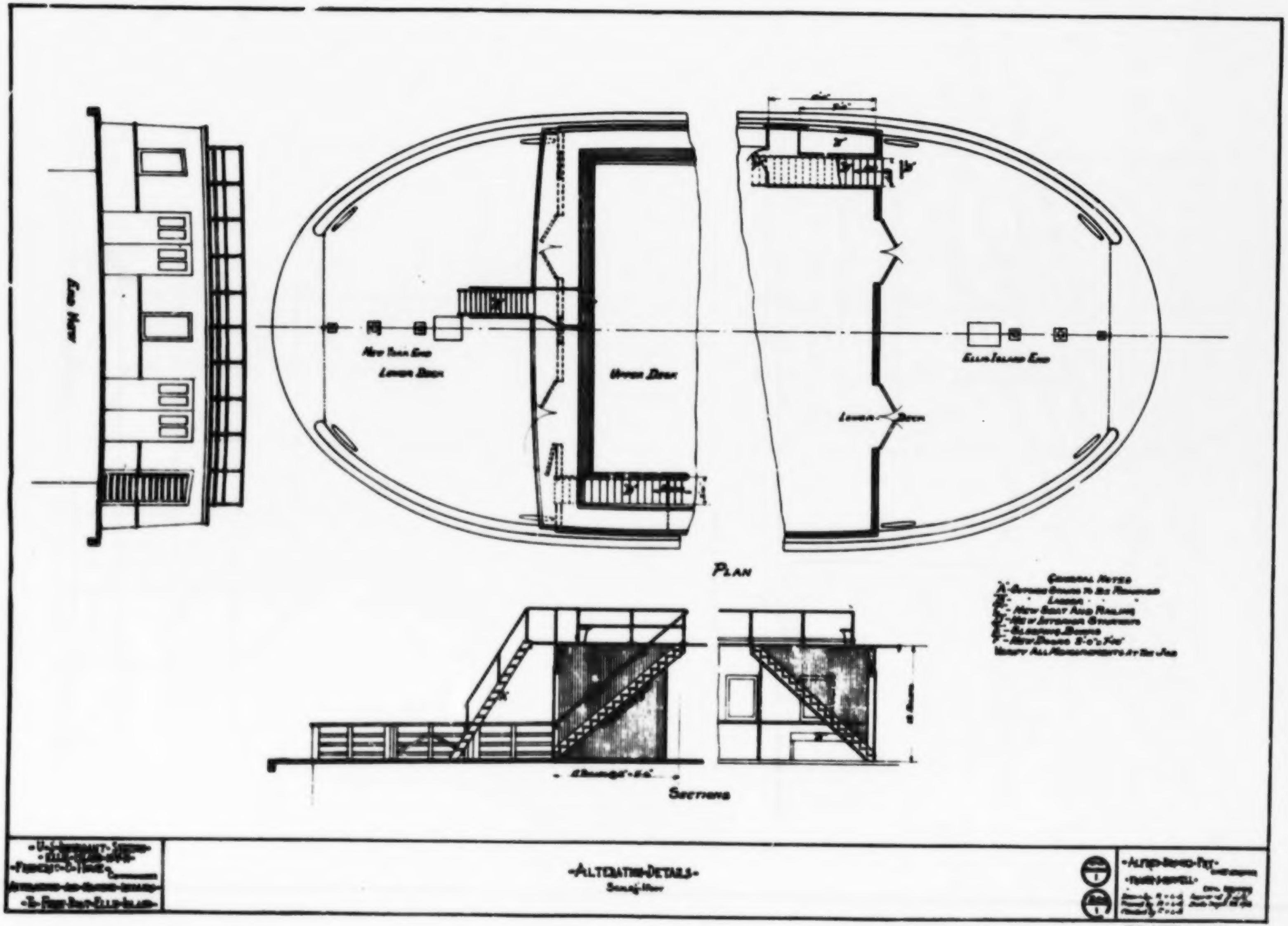

End View
New York End
Lower Deck
Upper Deck
Lower Deck
Ellis Island End
Plan
General Notes
New Seat And Railing
Verify All Measurements At The Job
Sections
-Alteration-Details-
-U.S. Immigrant Station-
-Ellis Island N.Y.-
-Frederic C. Howe Commissioner
-To Ferry Boat Ellis Island-

PLATE XIV

PLATE XIV

Alteration Details, Ferryboat *Ellis Island*, Sept., 25, 1916, NA, RG 85. The work proposed was not done at this time.

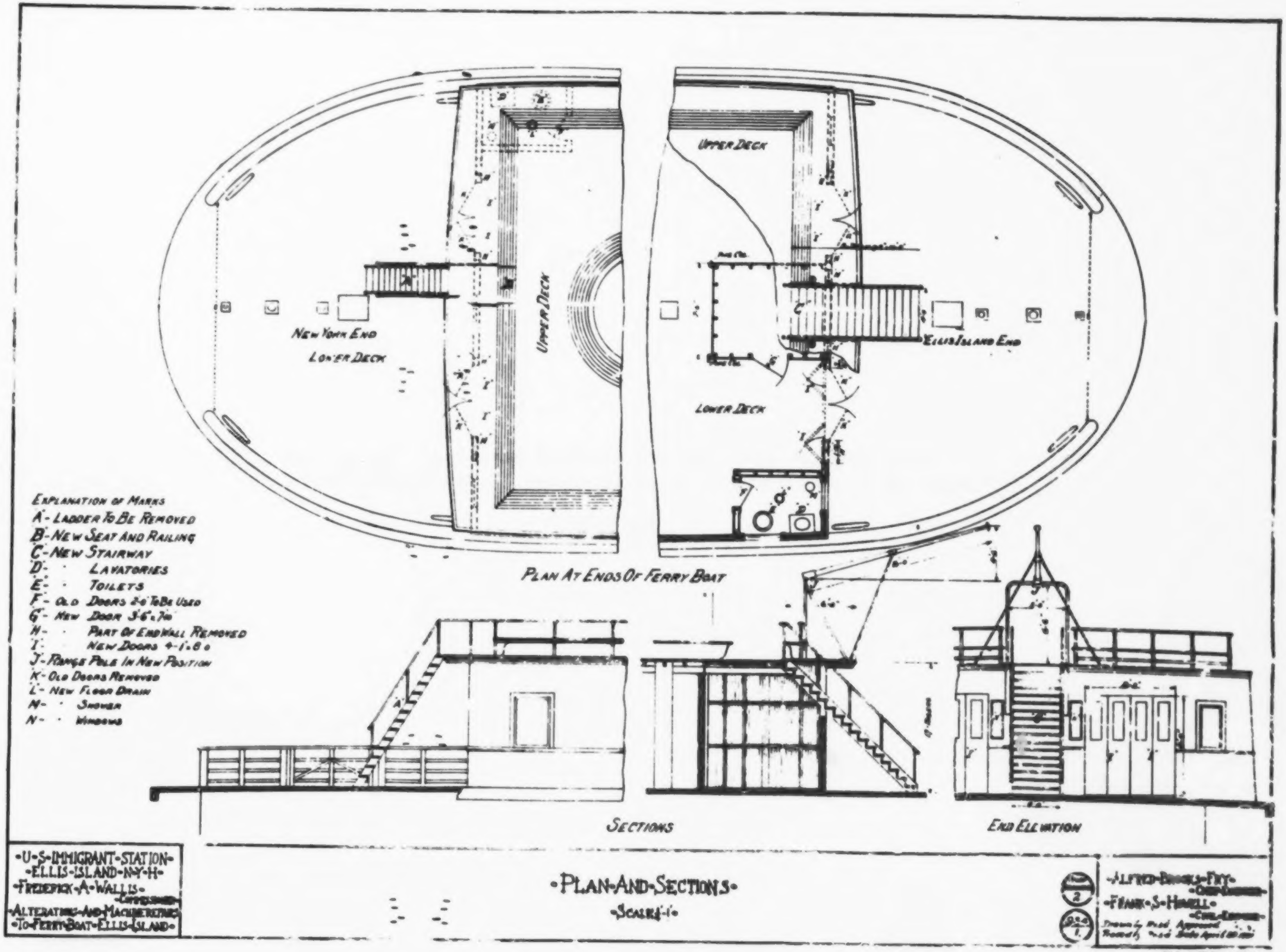

New York End
Lower Deck
Upper Deck
Upper Deck
Lower Deck
Ellis Island End
Plan At Ends Of Ferry Boat
Explanation of Marks
A- Ladder To Be Removed
B- New Seat And Railing
C- New Stairway
D- · Lavatories
E- · Toilets
F- Old Doors 2'0" To Be Used
G- New Door 3'6"x7'0"
H- · Part Of End Wall Removed
I- New Doors 4'-1.6 0
J- Range Pole In New Position
K- Old Doors Removed
L- New Floor Drain
N- · Shower
N- · Windows
Sections
End Elevation
·U·S·IMMIGRANT·STATION·
·ELLIS·ISLAND·N·Y·H·
·FREDERICK·A·WALLIS·
·Commissioner·
·ALTERATIONS·AND·MACHINERY REPAIRS·
·TO·FERRY·BOAT·ELLIS·ISLAND·
·PLAN·AND·SECTIONS·
·Scale ¼"-1'·
2
1
·Alfred·Brooks·Fry·
·Chief·Engineer·
·Frank·S·Howell·
·Civil·Engineer·

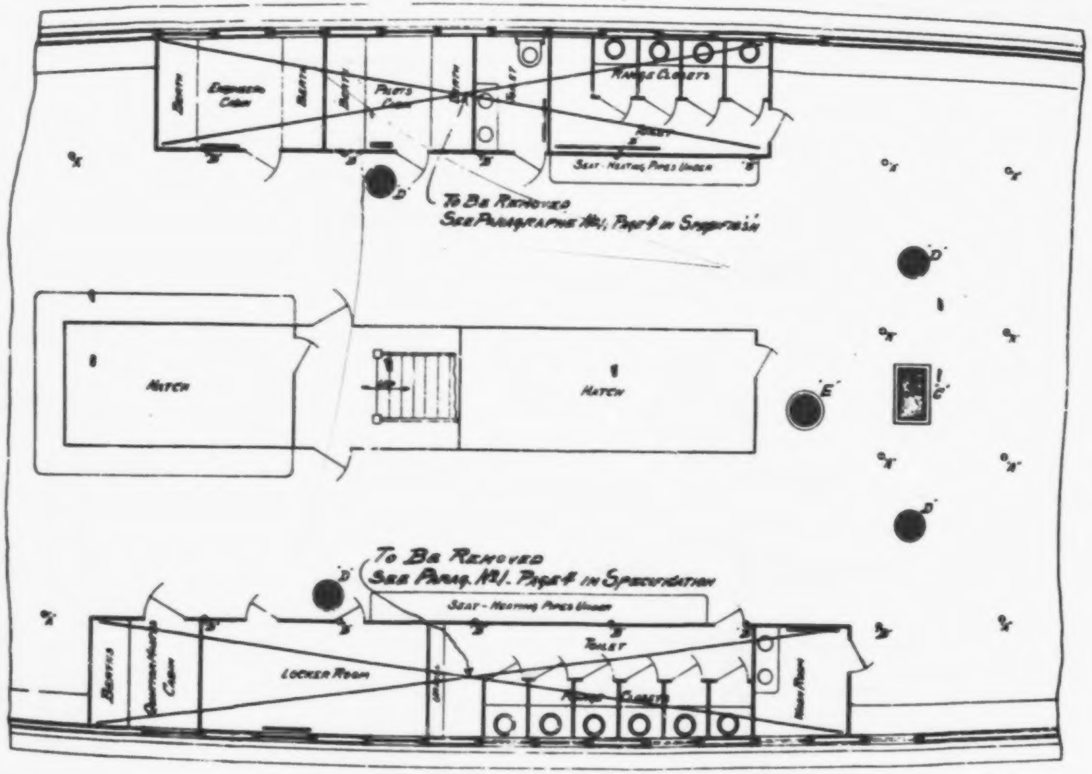
PLATE XV

PLATE XV

Plan and Sections of Ferryboat *Ellis Island*, April 22, 1921, NA, RG 85.

PLATE XVI

Plan of the Main Deck, Ferryboat *Ellis Island*, April 22, 1921, NA, RG 85.


Berth
Engineer's Cabin
Berth
Berth
Pilots Cabin
Berth
Toilet
Range Closets
Toilet
Seat - Heating Pipes Under
Hatch
Hatch
Seat - Heating Pipes Under
Toilet
Berths
Quartermaster's Cabin
Locker Room
Range Closets
Wash Room
"A"
"B"
"C"
"D"
"E"

To Be Removed
See Paragraph No 1, Page 4 in Specification

To Be Removed
See Parag. No 1. Page 4 in Specification

Plan Showing Central Part
Of Main Deck

Explanation of Marks
"A" - Stanchions In Place
"B" - Do New
"C" - New Coal Hole Cover
"D" - C. I. Covers, Removed
"E" - C.I. Cover To Remain

-U-S-IMMIGRANT-STATION-
-ELLIS-ISLAND-N-Y-H-
-FREDERICK-A-WALLIS-
-COMMISSIONER-
-ALTERATIONS-AND-MACHINE-REPAIRS-
-TO-FERRY-BOAT-ELLIS-ISLAND-

-PLAN-OF-MAIN-DECK-

-SCALE ¼"-1'-

2

934
2

-ALFRED-BROOKS-FRY-
-CHIEF-ENGINEER-
-FRANK-S-HOWELL-
-CIVIL-ENGINEER-
Drawn by R.S.S. Approved
Traced by R.S.S. Date April 22 1921

PLATE XVI

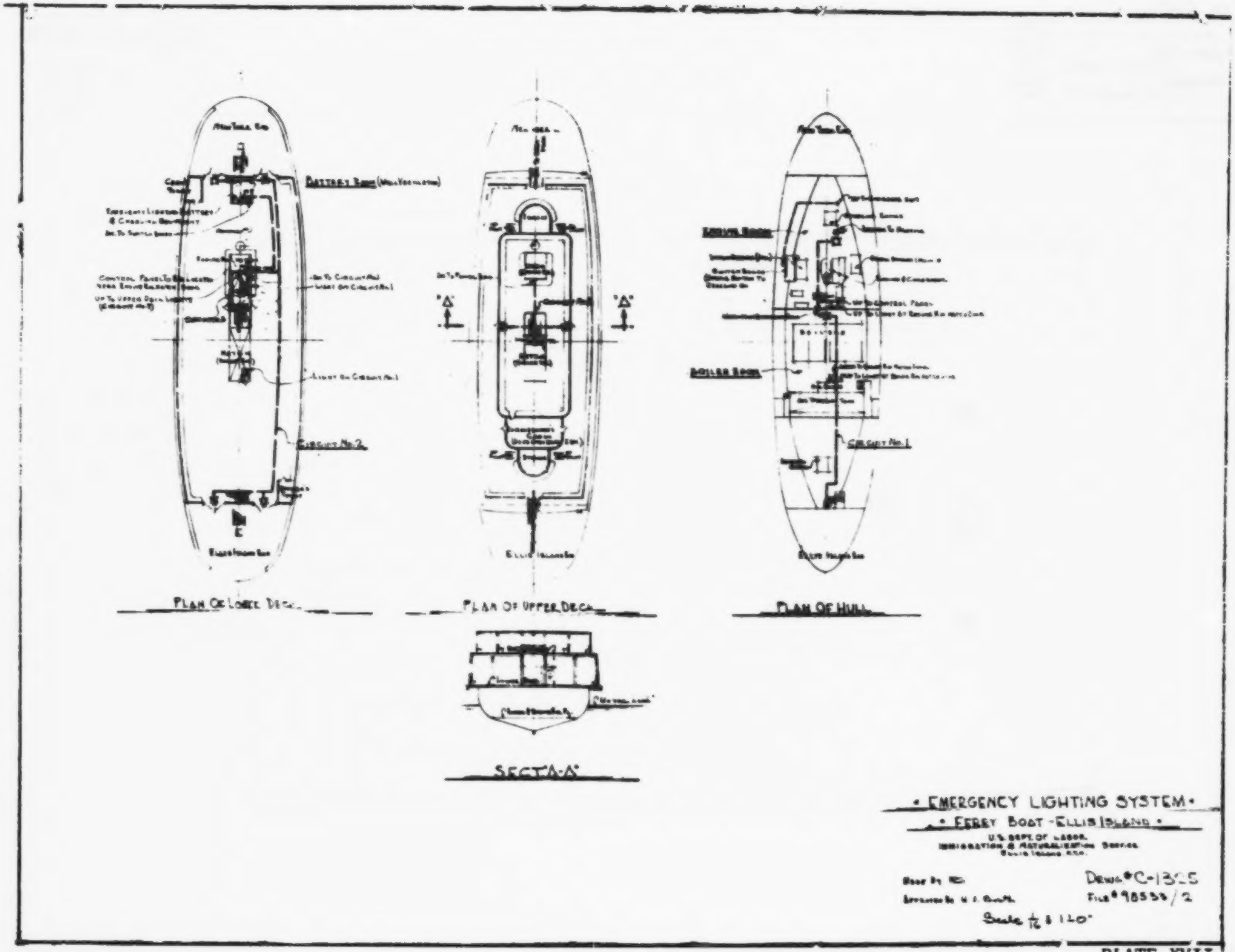
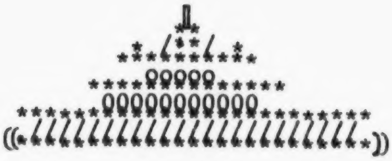
New York End
Battery Room
Emergency Lighting Battery & Charging Equipment
Control Panel
Light on Circuit No. 1
Circuit No. 2
Ellis Island End
Plan Of Lower Deck
"A"
"A"
New York End
Ellis Island End
Plan Of Upper Deck
Sect "A-A"
New York End
Engine Room
Boiler Room
Circuit No. 1
Ellis Island End
Plan Of Hull
• EMERGENCY LIGHTING SYSTEM •
• FERRY BOAT - ELLIS ISLAND •
U.S. DEPT. OF LABOR.
IMMIGRATION & NATURALIZATION SERVICE
ELLIS ISLAND, N.Y.
Dewg. # C-1325
File # 98533/2
Scale 1/16 = 1'-0"

PLATE XVII

PLATE XVII

Emergency Lighting System, Ferryboat *Ellis Island*, files, I & NS.



GPO 877-747